

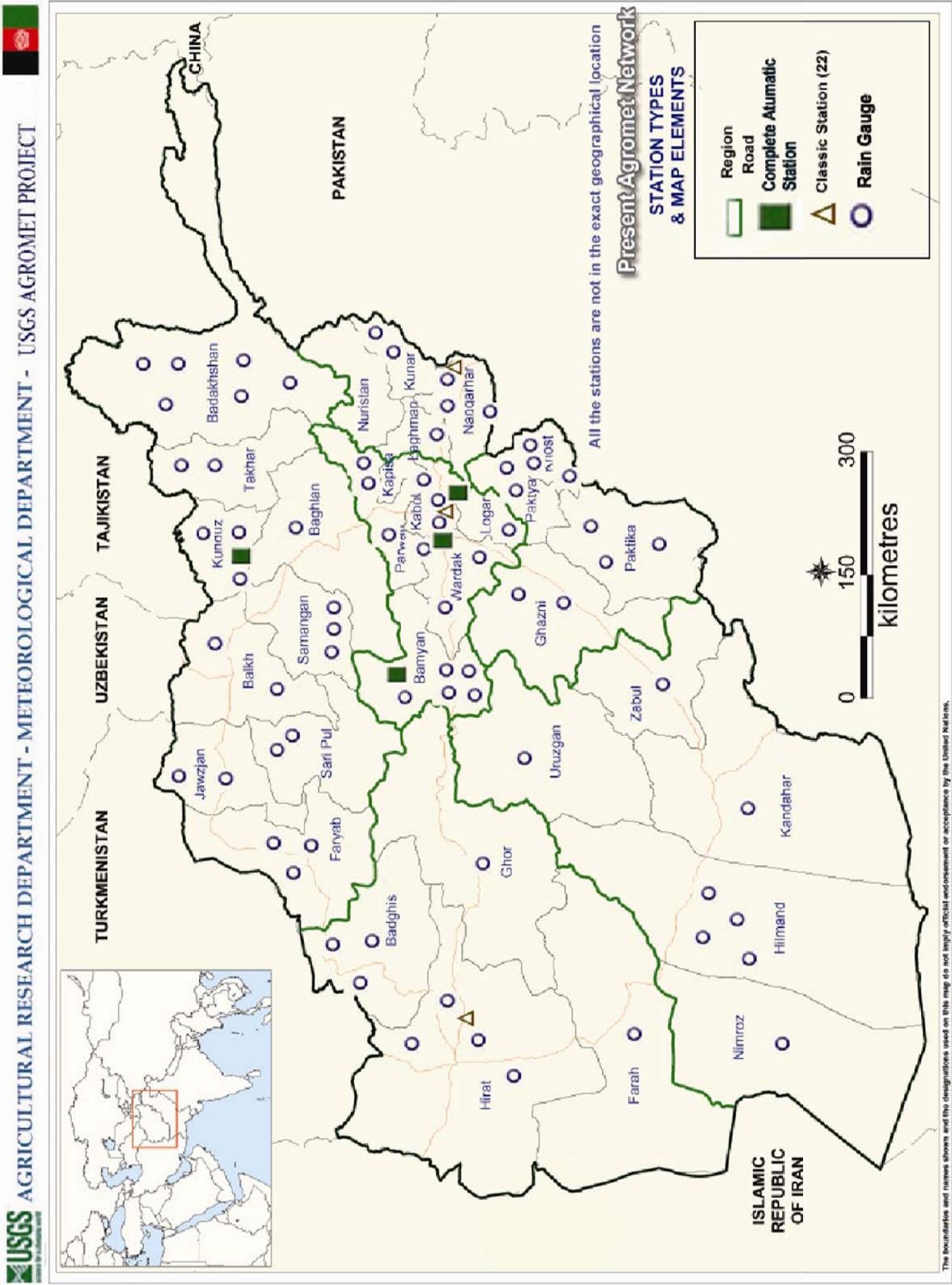
Annex 1:

Agromet Network Agromet Project Situation

A: Weather Stations B: Crop / Pasture Monitoring

MAIL/USGS Agromet Project: Status as of September 2008

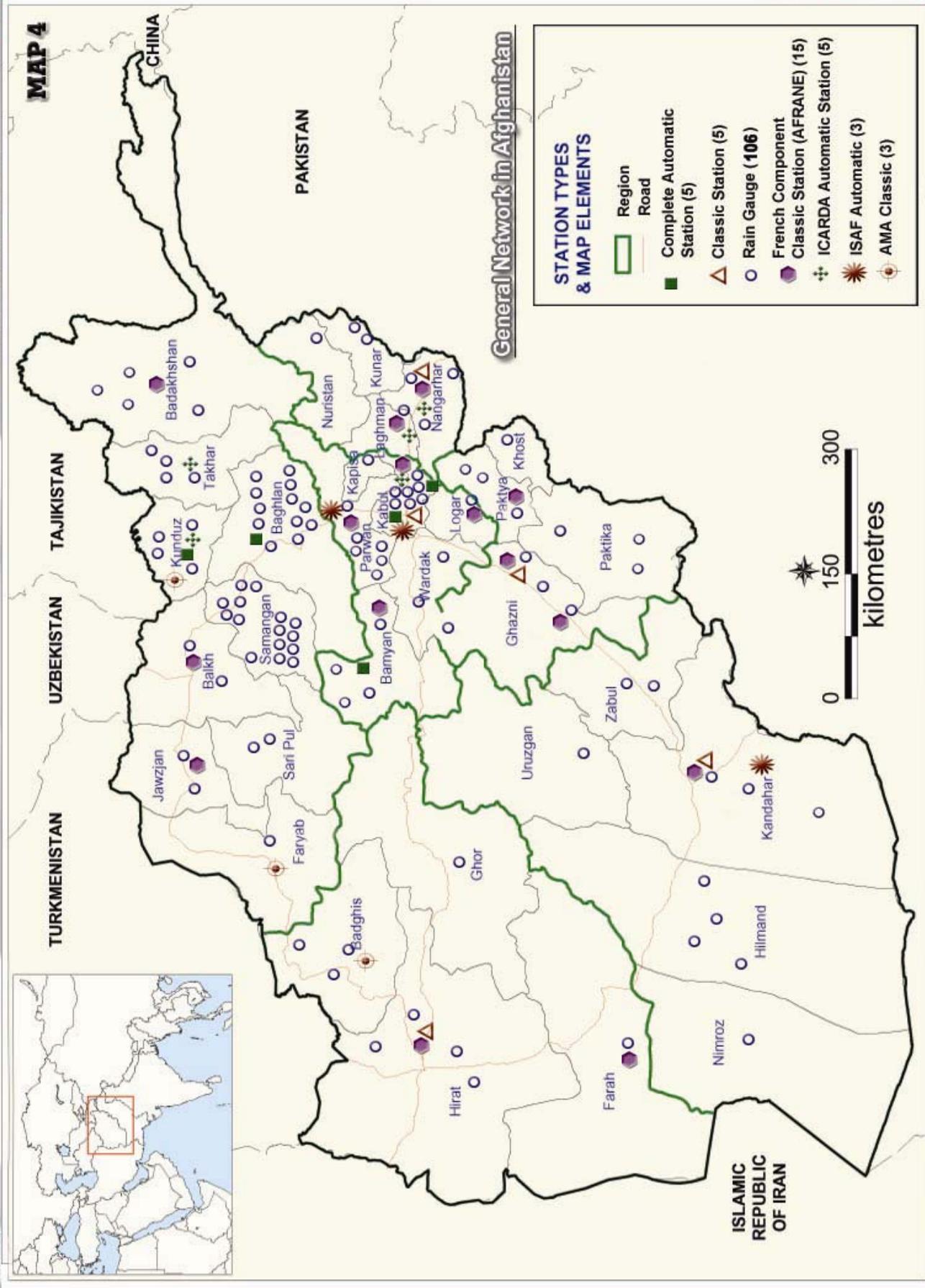
- 1) MAIL/USGS Agromet Project was established in Afghanistan 1st January 2004 to install a network of Agrometeorological stations and develop a complete agromet services. To date, the agromet Project has installed and is managing 80sites. All 80 sites record rainfall and snowfall. In addition to rainfall and snowfall, 76 out of 80 report on crop (wheat, maize, rice and barley), pasture and grazing conditions twice a month. The information collected includes all adverse weather conditions, shortage of agricultural inputs, weeds, pests, diseases etc. Other recorded information includes crop phonological stages (land preparation), planting and harvesting dates, expected and actual The Agromet project receive data from 15 classic station from AMA which consist 8 meteorological parameter and publish on its monthly bulletins. providing observations three times a day.18 of these sites are classical stations, recording seven kinds of weather parameters .four of these sites are automatic stations that can report up to 20 weather parameters daily.
- 2) The agromet project has developed an agrometeorological database and information system, with a web site developed. Information in the data base includes data from past 6 years (taken from 89 stations), historical data from 1942 to 1993 (.....depending on sites) with up to 29 weather parameters , and NDVI files since 1998. The data base heart was built using the “ Agrometshell” which includes around 20 agrometeorological applications fully integrated into the database.
- 3) Agromet Project has trained 260 observers, including people from different Government and Non Government Organizations, although some of the ministry national agromet counterpart had been sent to abroad for getting knowledge in the Agromet field.
- 4) Agromet Project has some 78observers paid through incentives, five national MAIL/AMA counterpart and 3 USGS Agro meteorological staff.
- 5) Agromet Project currently prepares weekly reports, monthly agromet bulletins and Seasonal Bulletins based on Ground and Satellites observation., water balance model and rainfall probabilities and so on, with updated agrometeorological situation analysis and graphs, maps etc. the bulletin is transmitted to key players in english and dari, the agromet project has also produced papers for technical meeting, press releases and special newsflashes throughout the agricultural year.
- 6) The agromet project is working closely with the united States Geological Survey(USGS), regular data and analysis are also transmitted regularly to over 150 local and international users around the country.
- 7) In general, the gromet Project provides timely information and data related to the impact of climate on agriculture and food security.



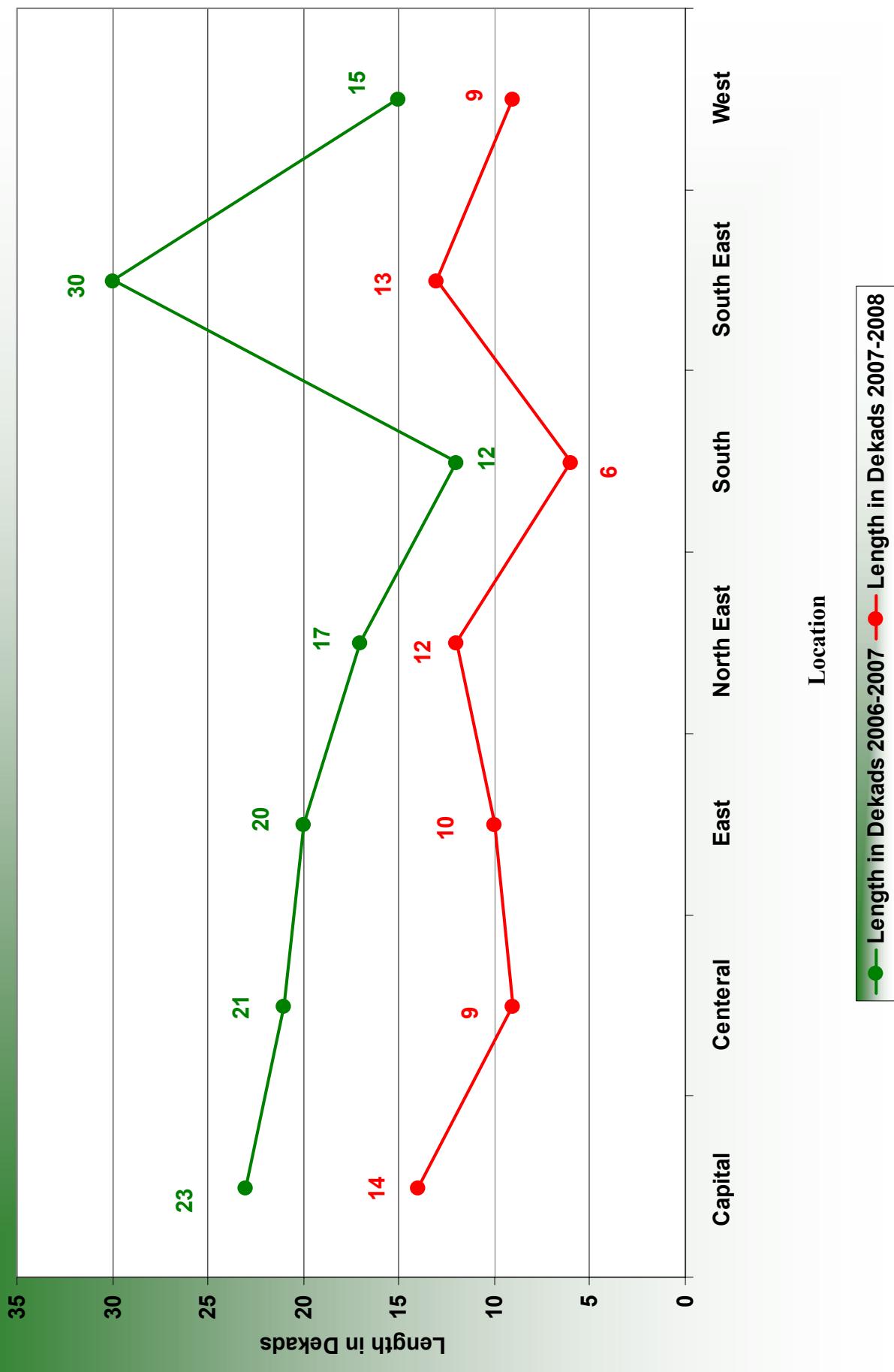
The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Data Source: USGS Agromet Component

Date: 30 - 12 - 2009

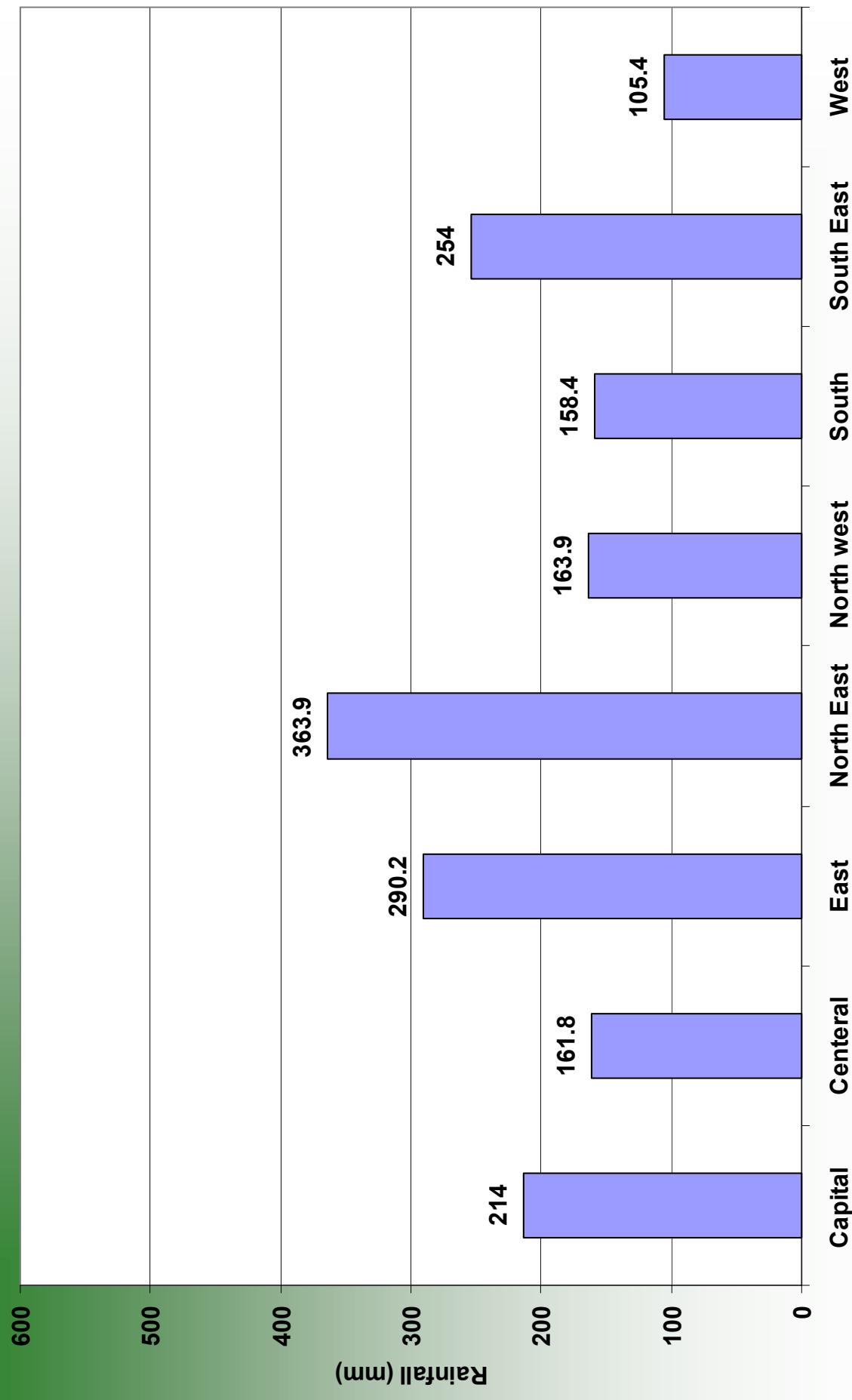
MAP 4


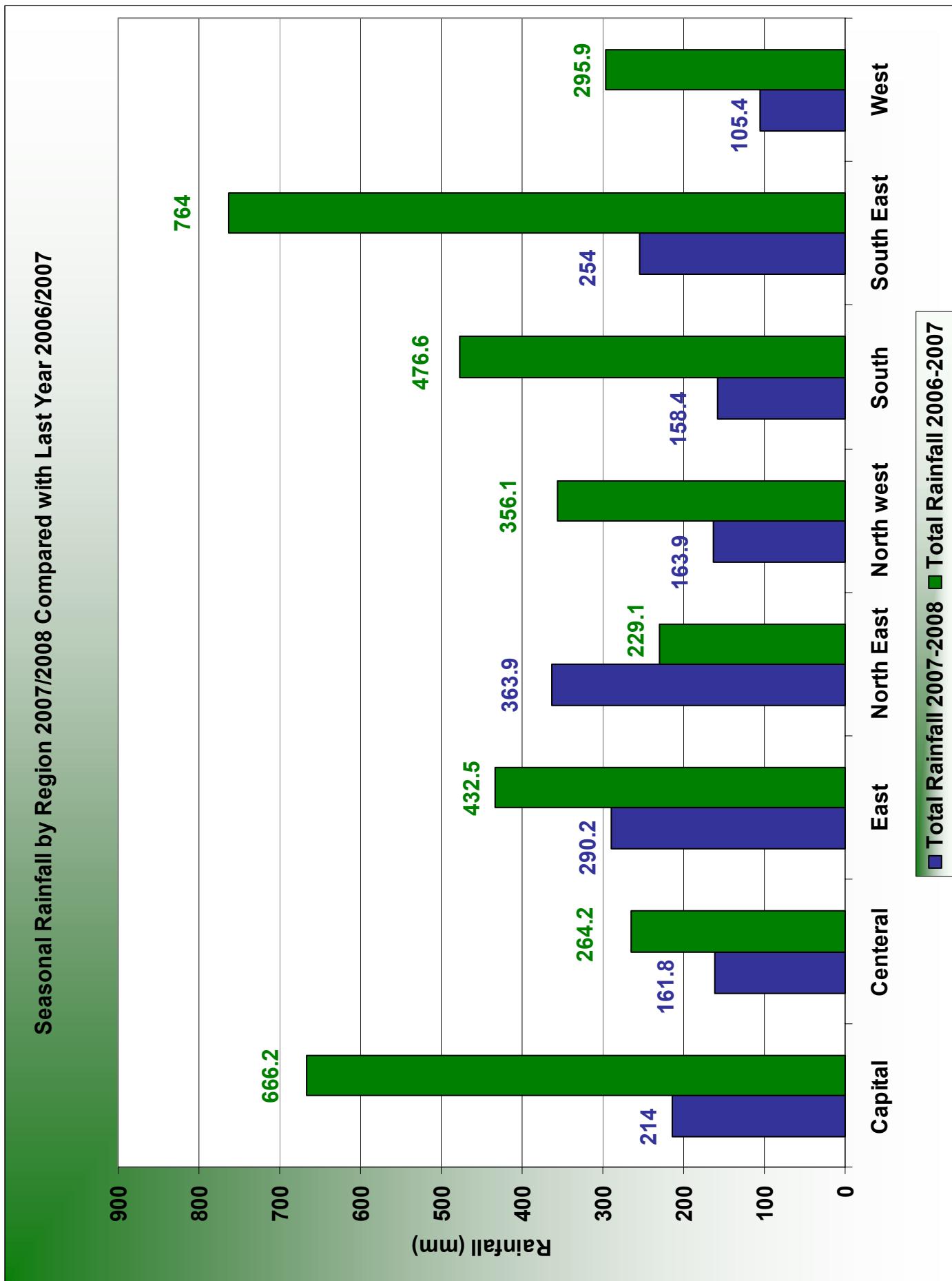
Rainfall Season Length in Dekads by Region 2007-2008 Compared to 2006-2007-Afghanistan

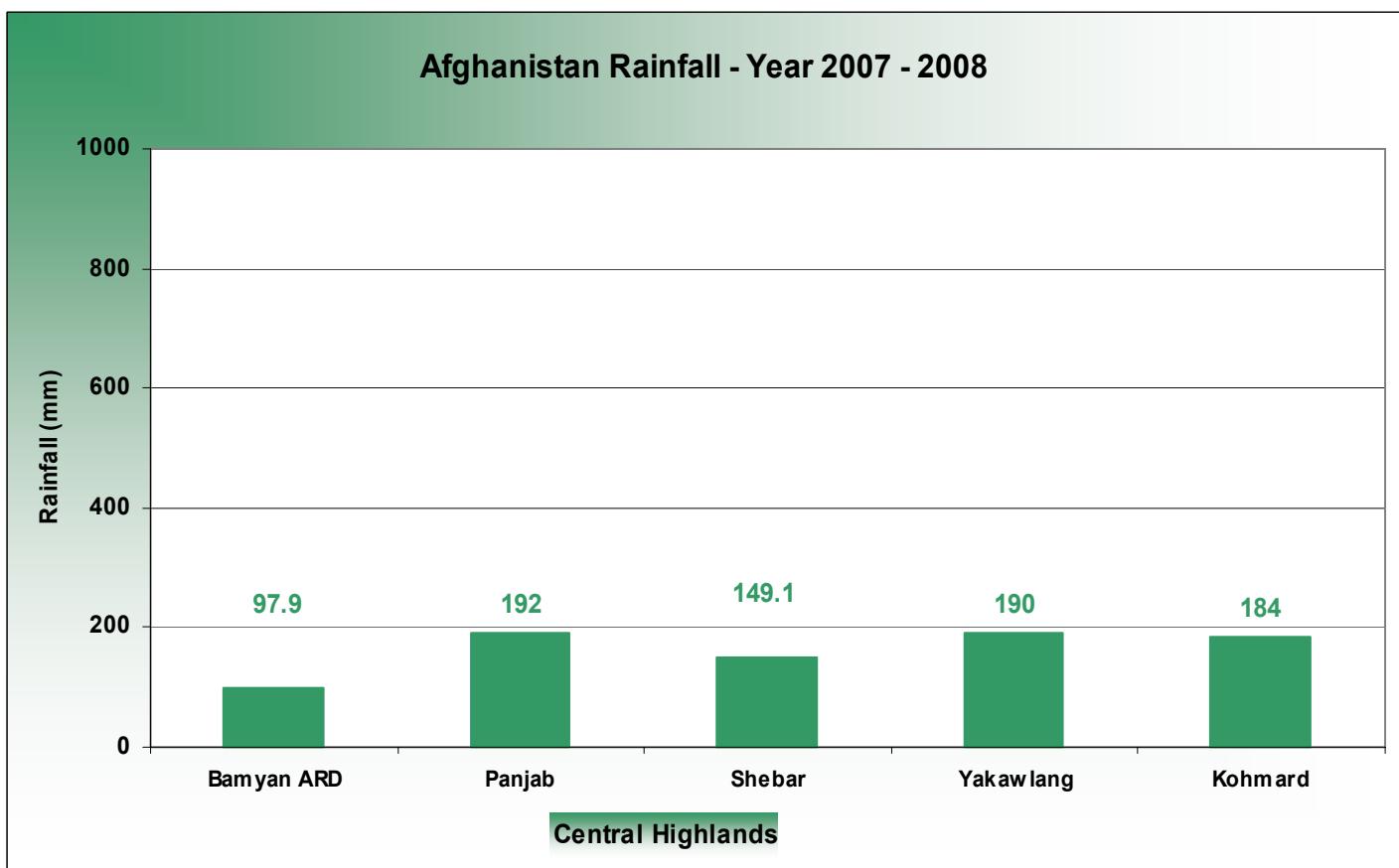
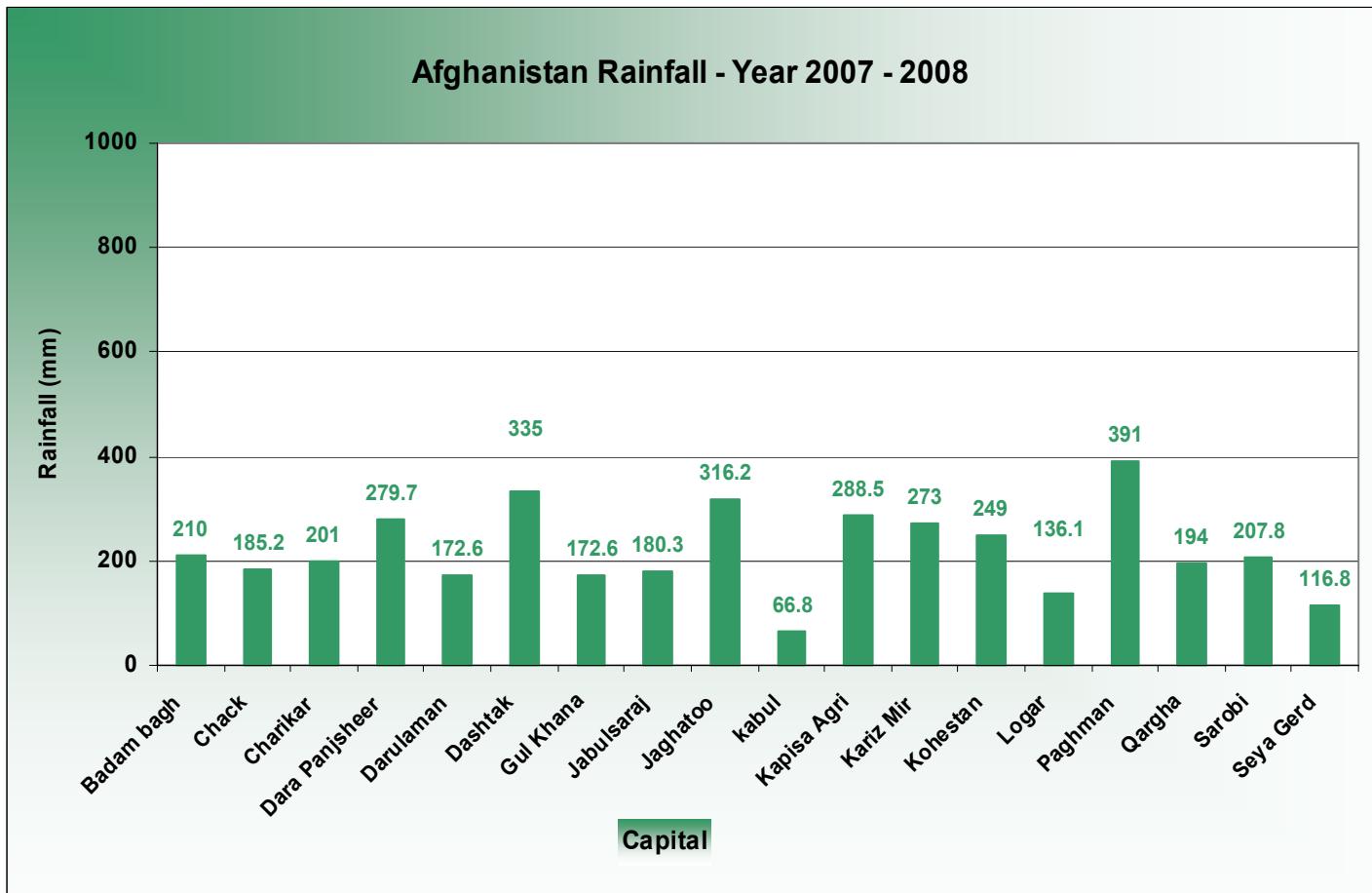


Average Recorded Rainfall (mm) by Region - Afghanistan Season 2007 - 2008													
Region	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Yearly Total
Capital	1.8	0	4.3	25.5	46.9	22.6	6.8	96.6	12.6	0.2	4.3	1	222.6
Central Highlands	0	0	4.9	9.6	8.3	9.3	3	108.6	8.2	0.4	0.8	0	153.1
East	23	3.5	0.7	6.7	48	19.2	19.3	109.8	16.5	0	10.6	32.1	289.4
North east	0.4	0.3	0.4	104.4	82.5	30.8	50.2	72.5	19.1	0.6	2.3	0	363.5
North west	0	0	2.6	38.5	26.8	31.4	10.6	21.4	7	0	0	0	138.3
South	0	0	0.1	16.8	84.8	40.1	0.5	15.3	0	0	0	0	157.6
South east	7.7	0.5	2.8	10.5	37.8	15.7	13.7	73.7	13.9	12	29.9	27.1	245.3
West	0	0	0.2	25.9	27	16.1	1.8	38.7	2	0	0	0	111.7
Minimum	0	0	0.1	6.7	8.3	9.3	3	15.3	0	0	0	0	42.7
Maximum	23	3.5	4.9	104.4	84.9	40.1	50.2	109.8	19.1	12	29.9	32.1	513.9
Average	4.1	0.5	2	29.7	45.2	23.1	13.2	67	9.9	1.6	5.9	7.5	210.1

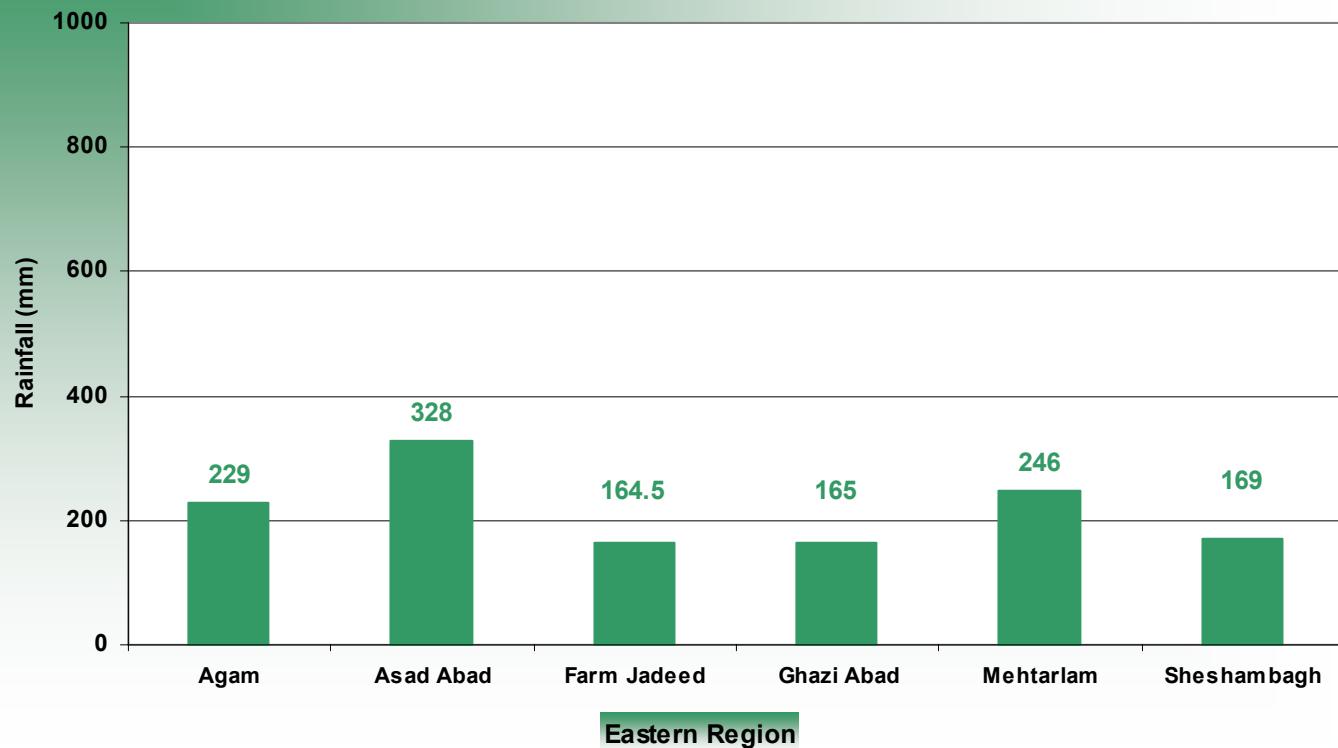
Accumulated Yearly Rainfall By Region in mm 2007/2008



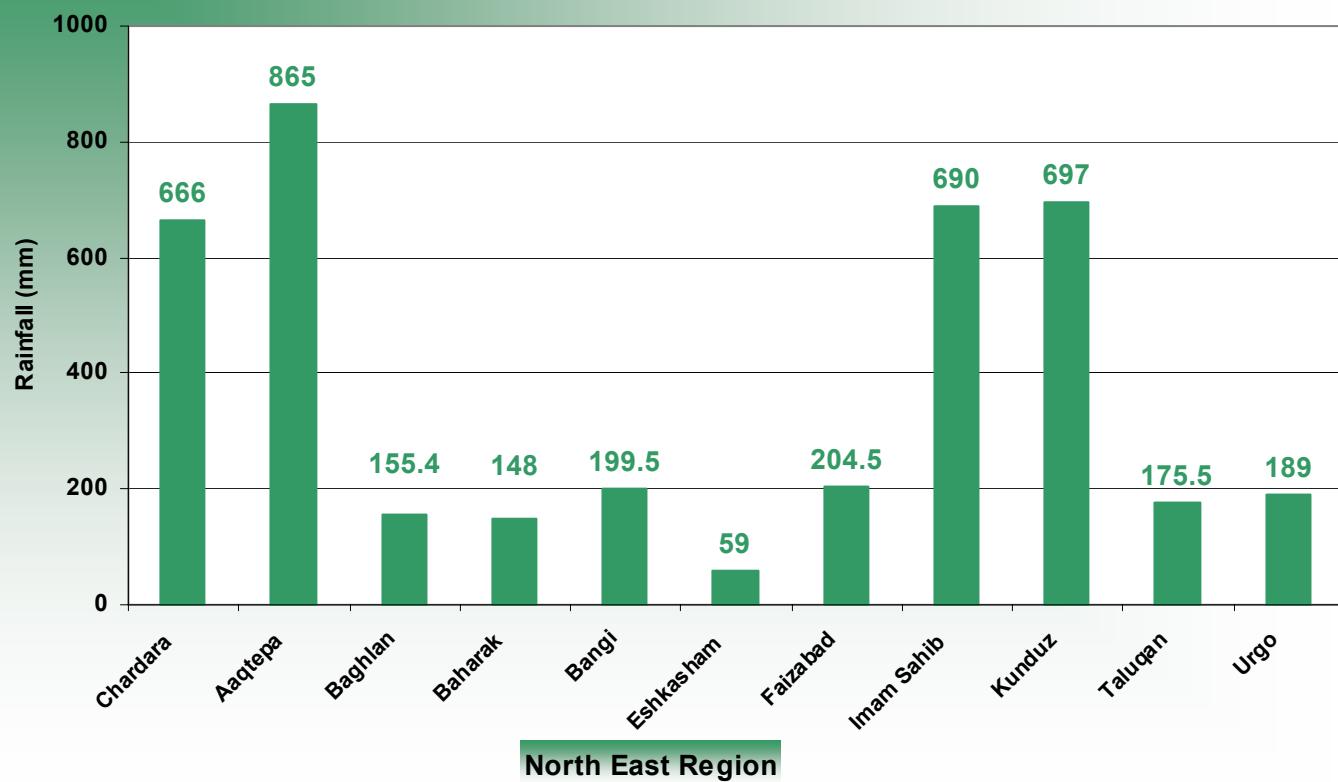


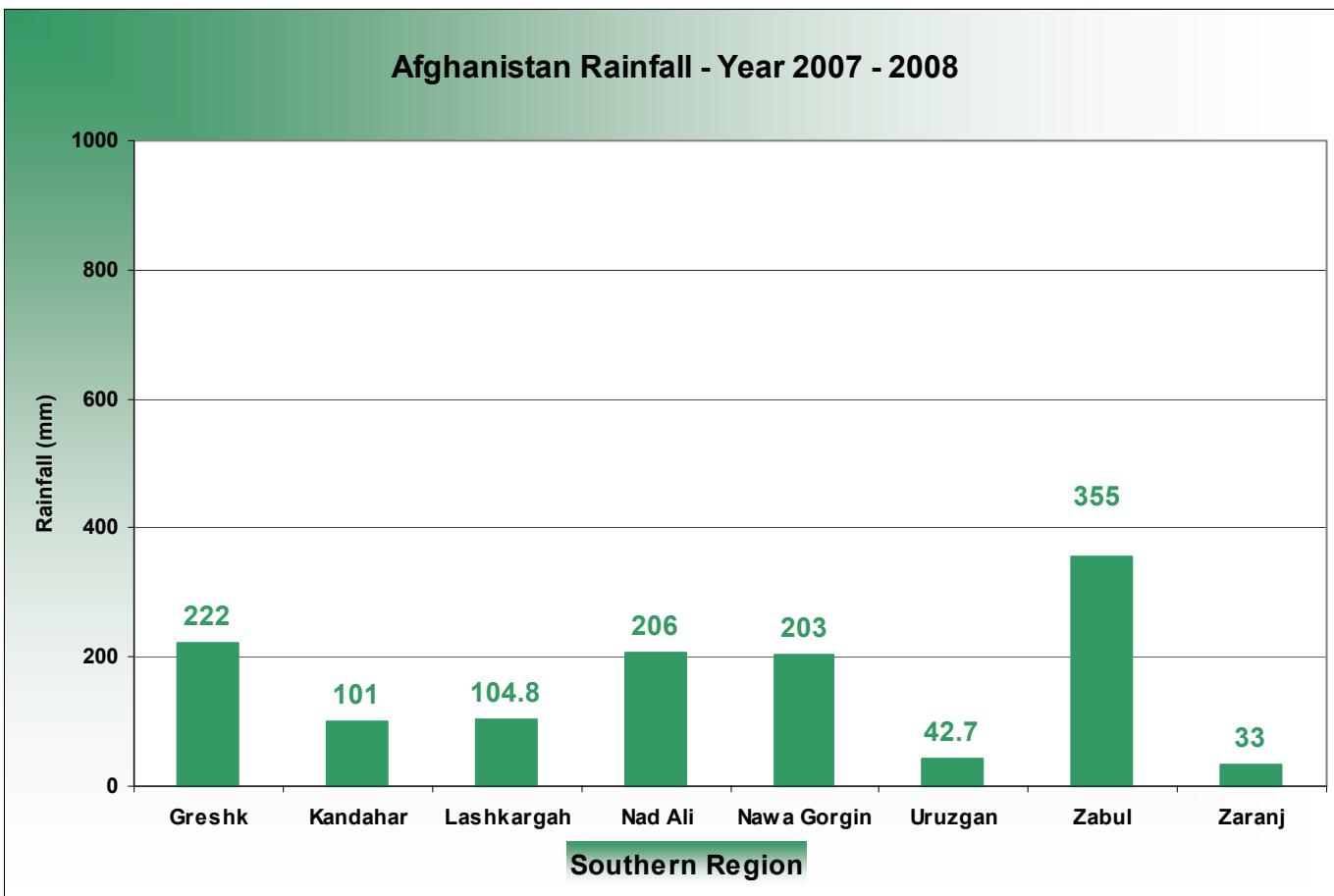
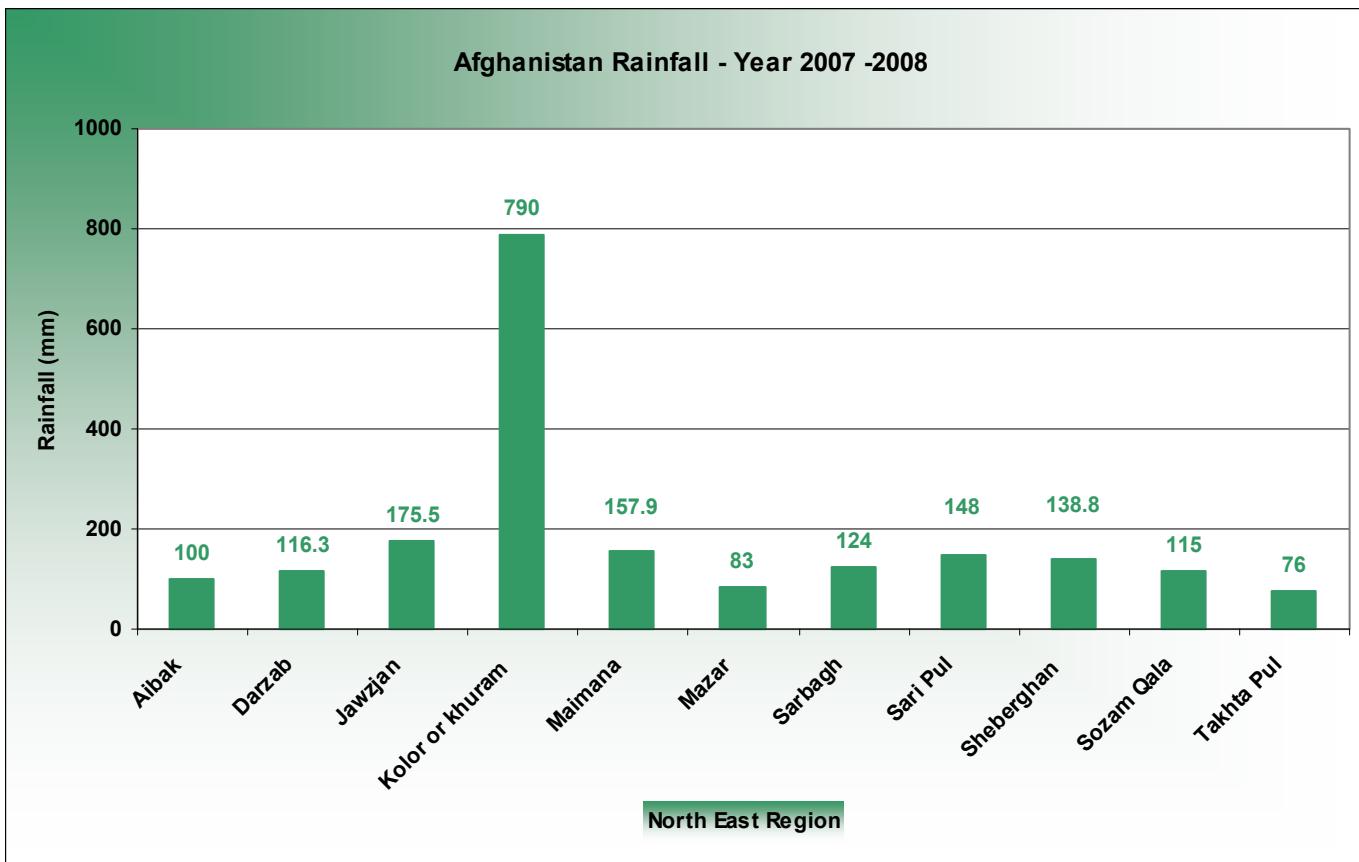


Afghanistan Rainfall - Year 2007 - 2008

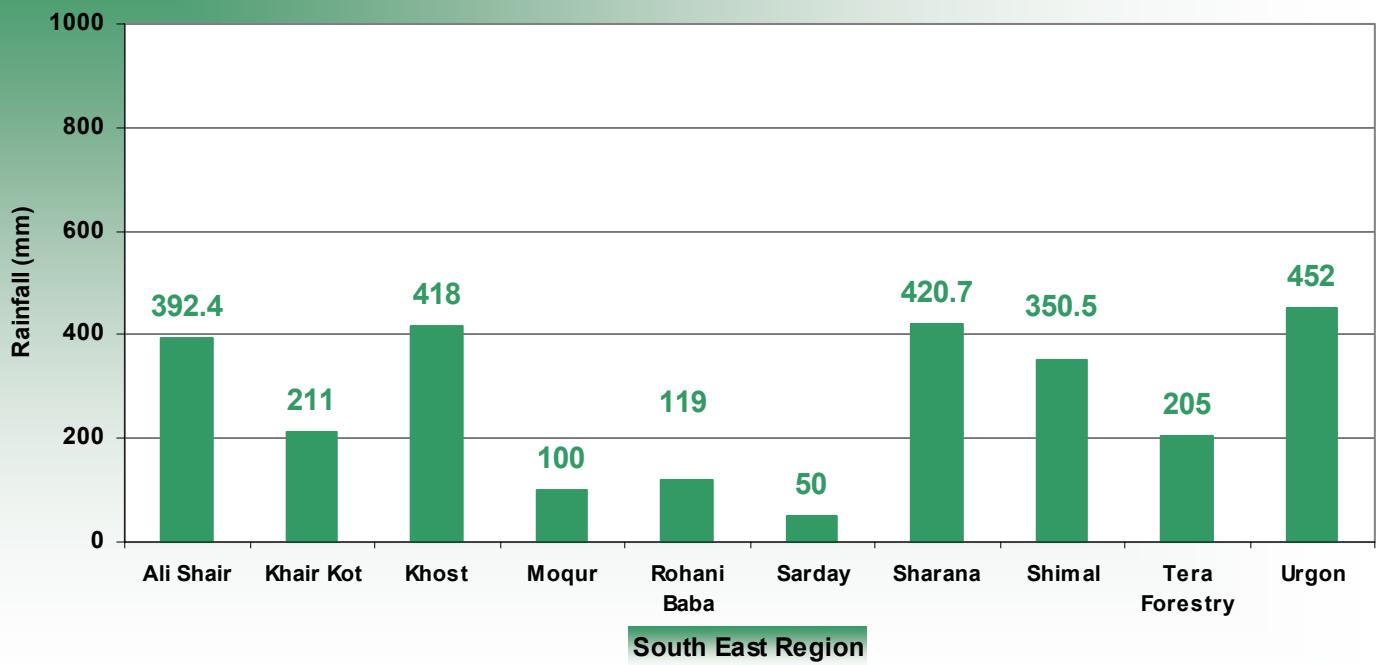


Afghanistan Rainfall - Year 2007 - 2008



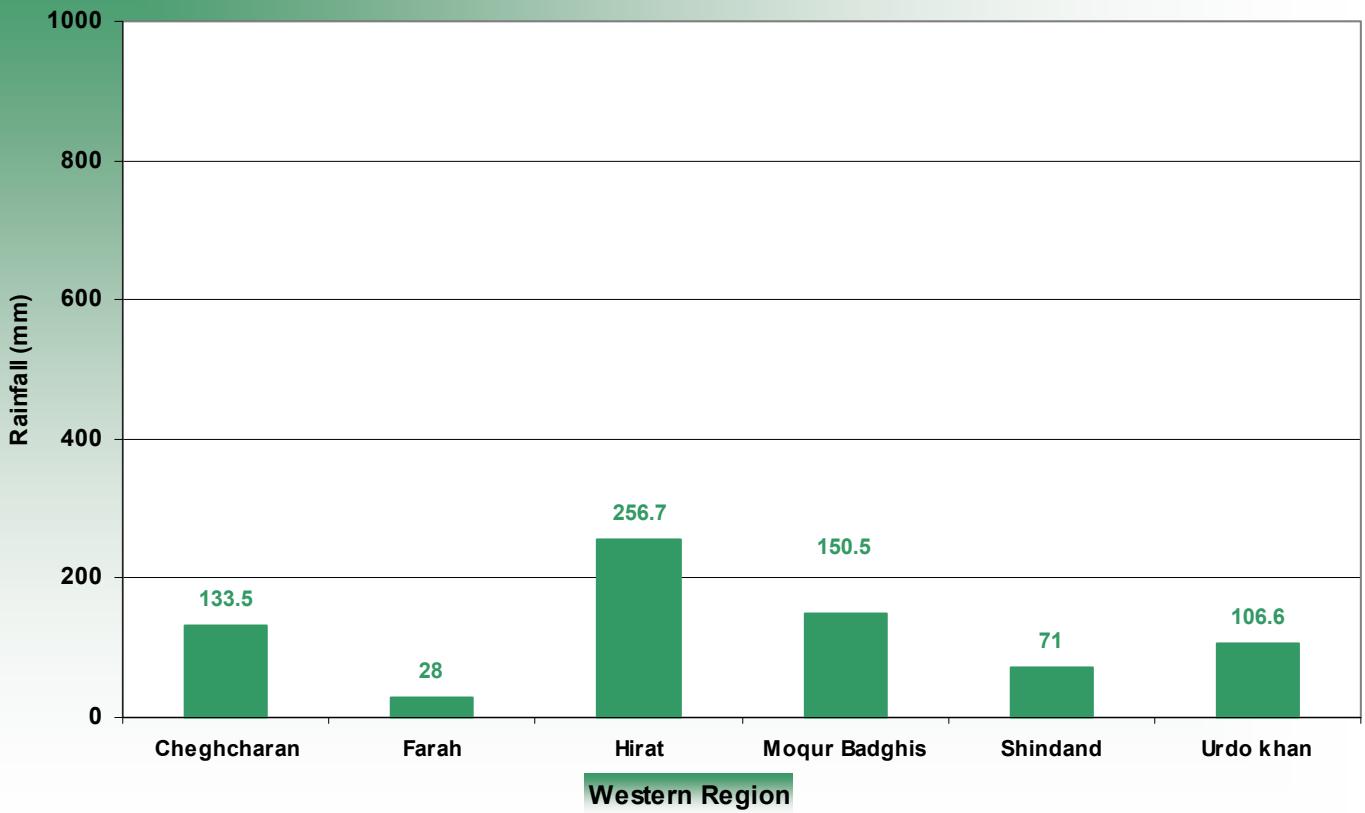


Afghanistan Rainfall - 2007 - 2008



South East Region

Afghanistan Rainfall - Year 2007 - 2008



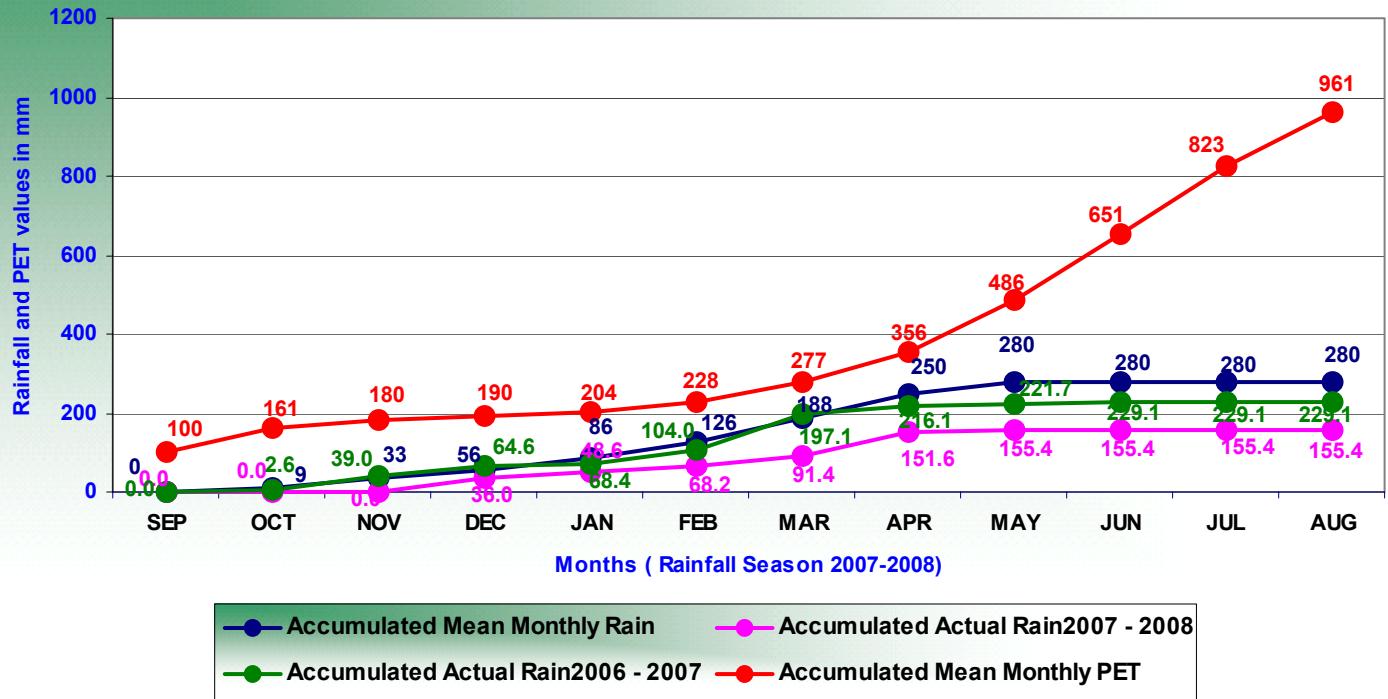
Western Region

Accumulated Rainfall (mm) For the Season 2007 - 2008

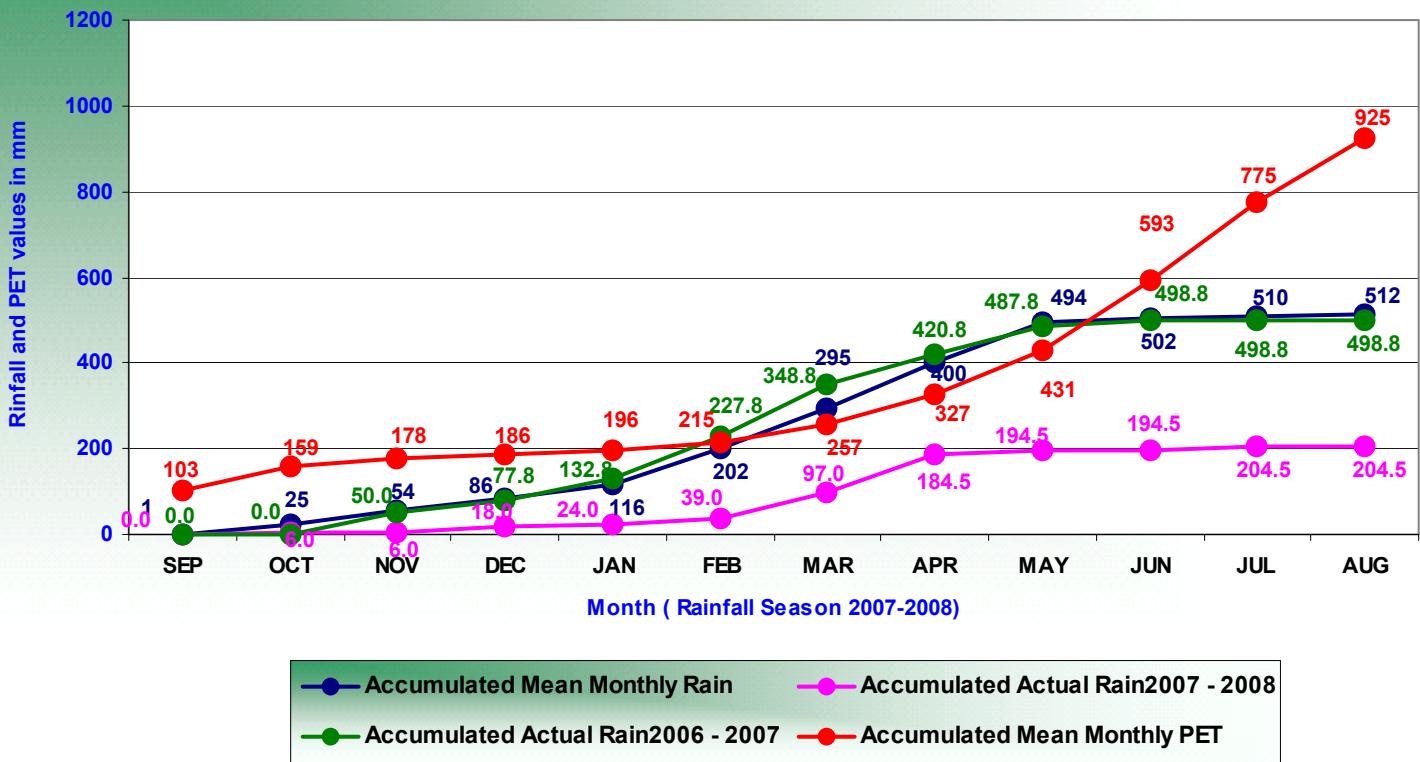
Compared with:

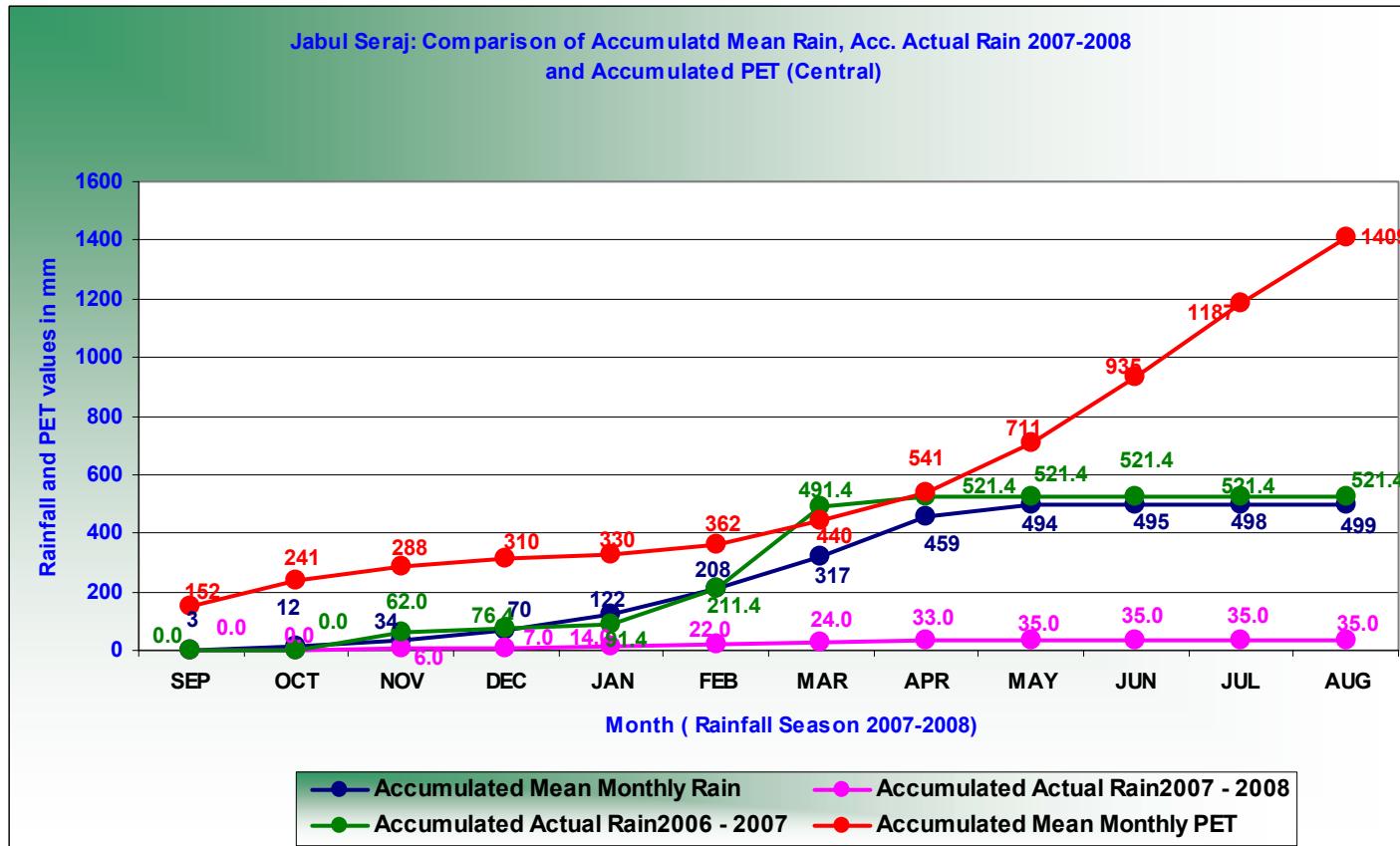
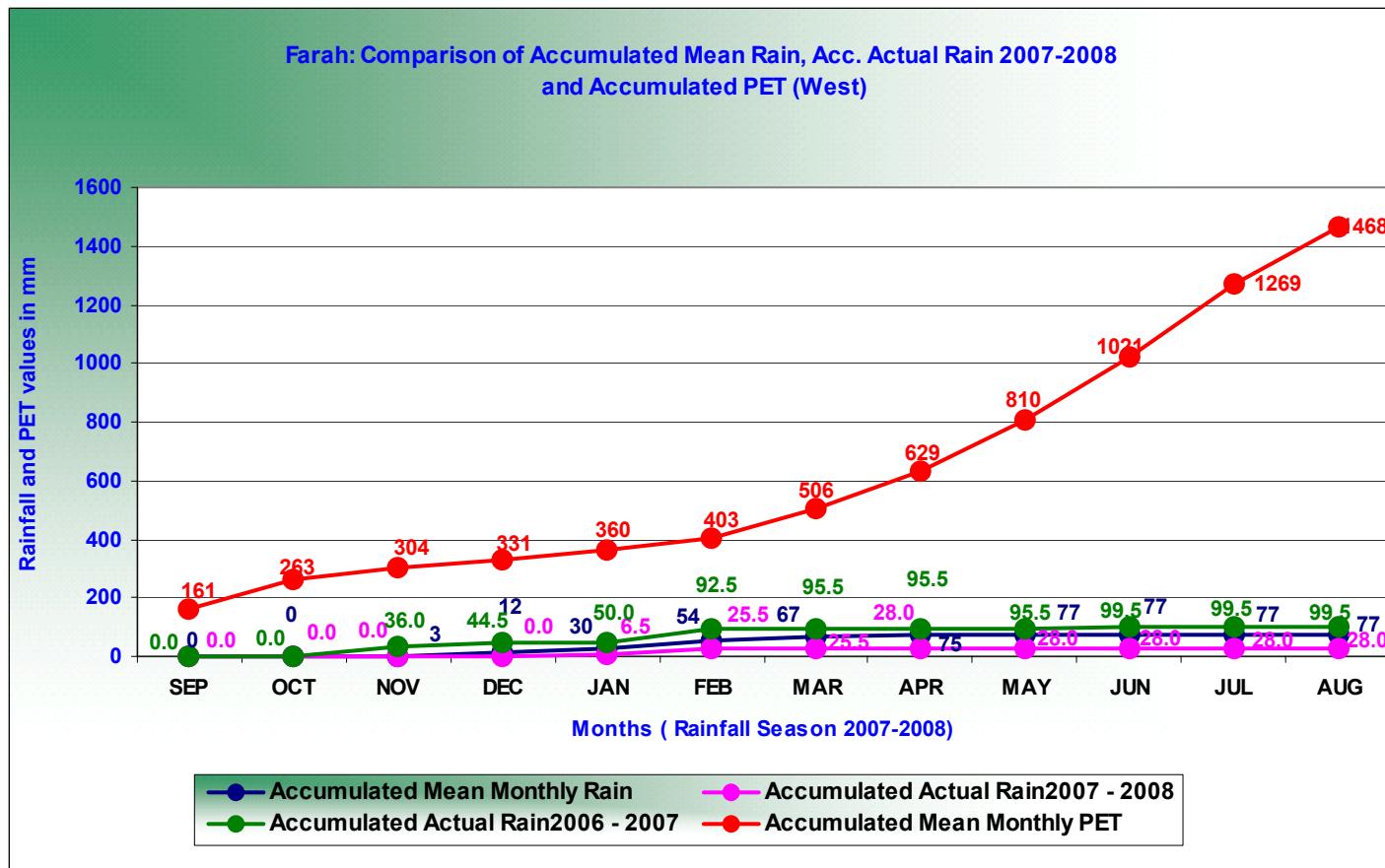
- Last Year
- Potential Evapotranspiration (PET)
- Long Term Average

**Baghlan: Comparison of Accumulated Mean Rain, Acc. Actual Rain 2007-2008 and Accumulated PET
(North East)**

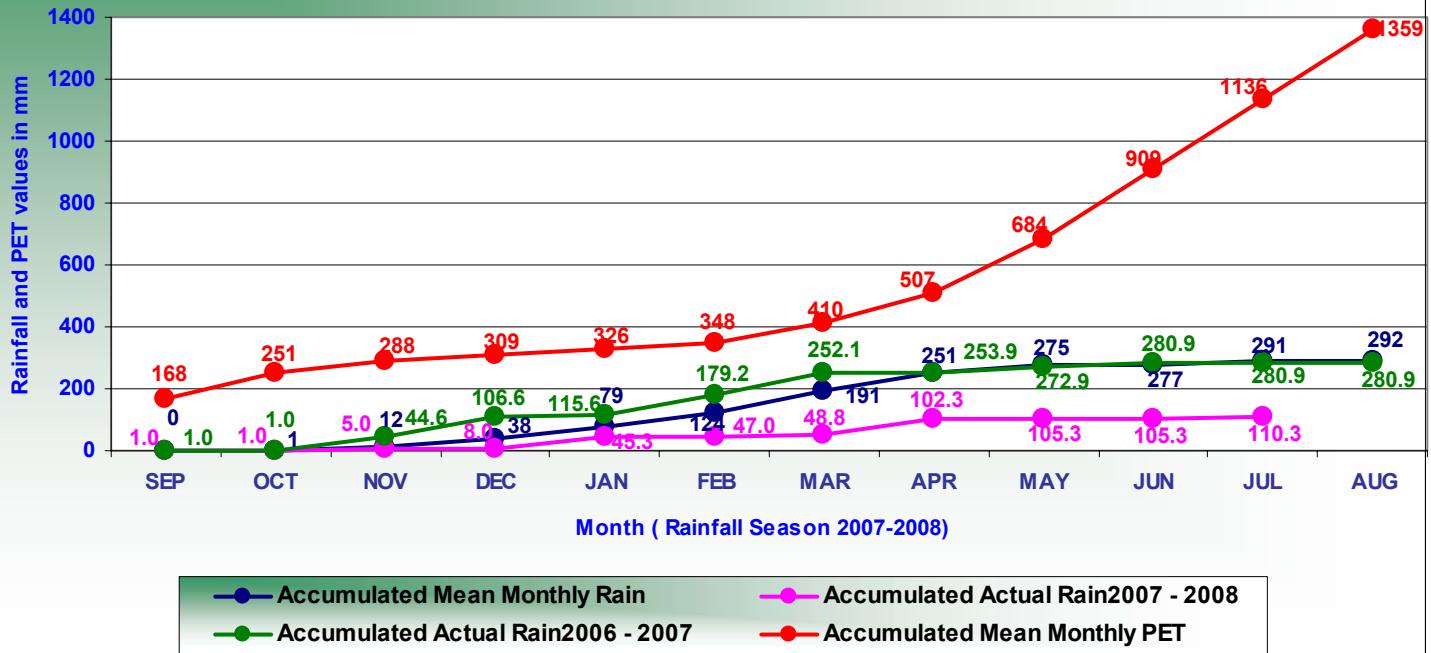


**Faiz Abad: Comparison of Accumulated Mean Rain, Acc. Actual Rain 2007-2008
and Accumulated PET (North East)**

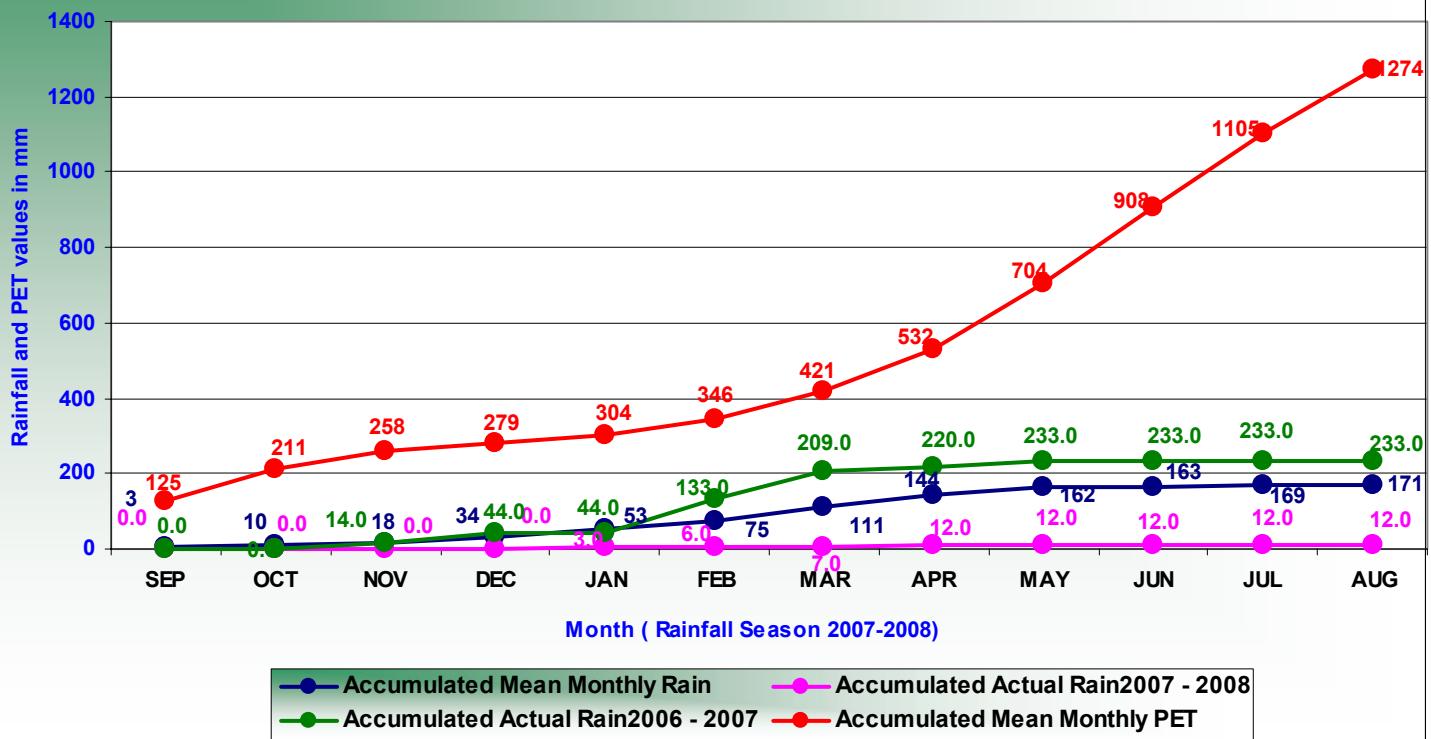




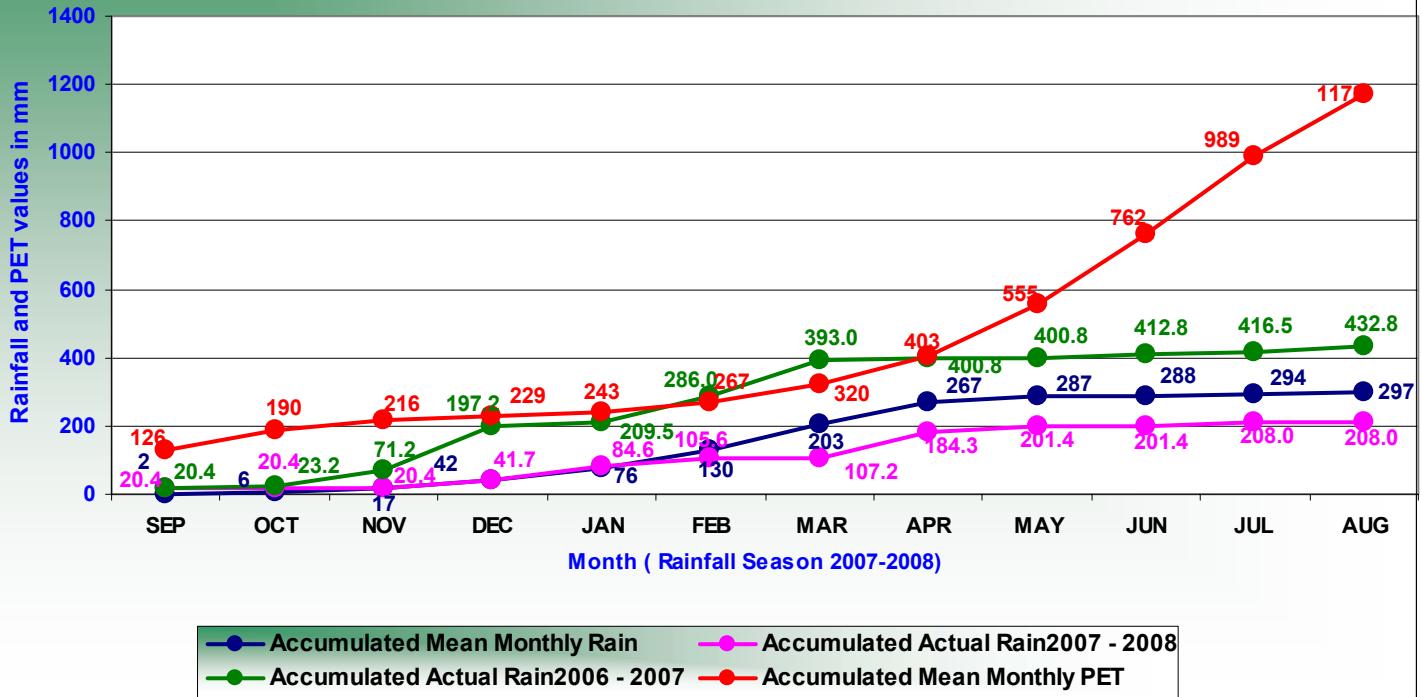
Ghazni: Comparison of Accumulated Mean Rain, Acc. Actual Rain 2007-2008
and Accumulated PET (South)



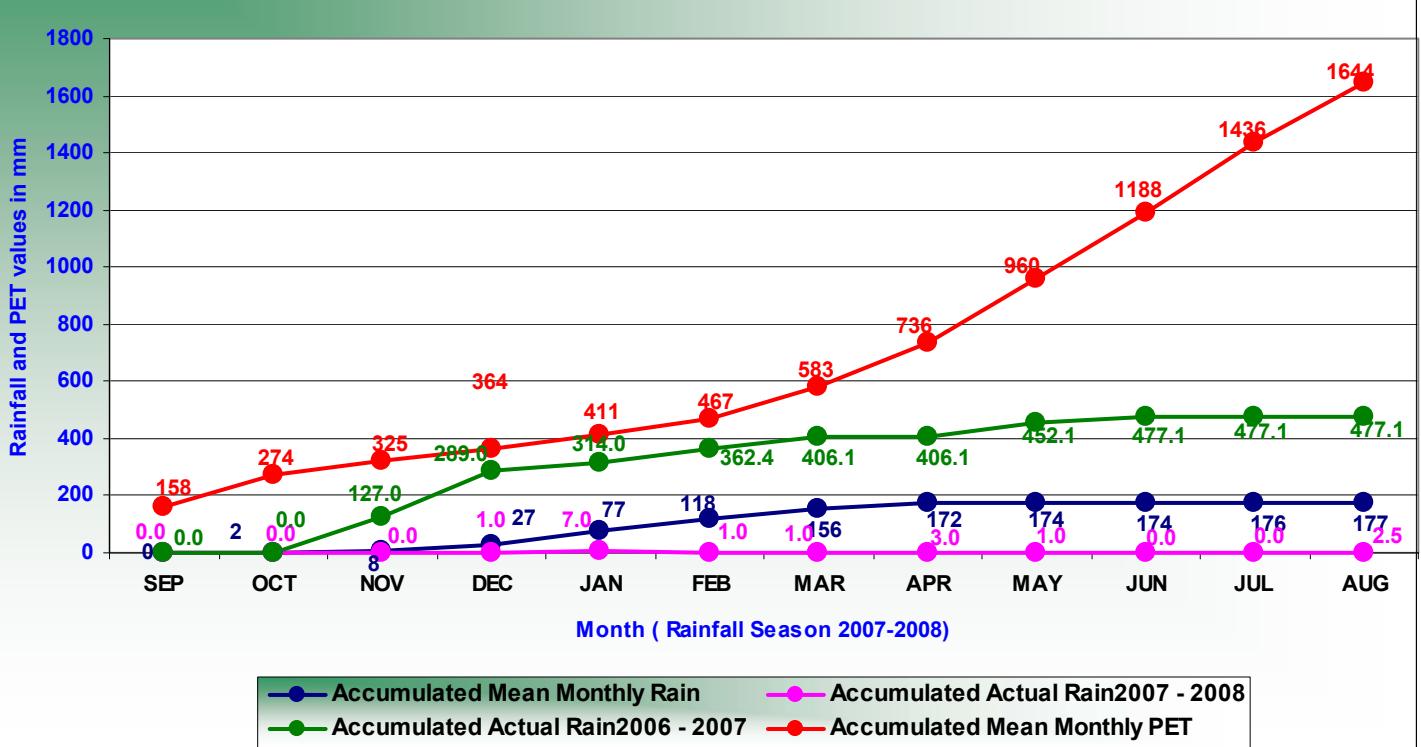
Jalalabad: Comparison of Accumulated Mean Rain, Acc. Actual Rain 2007-2008
and Accumulated PET (East)



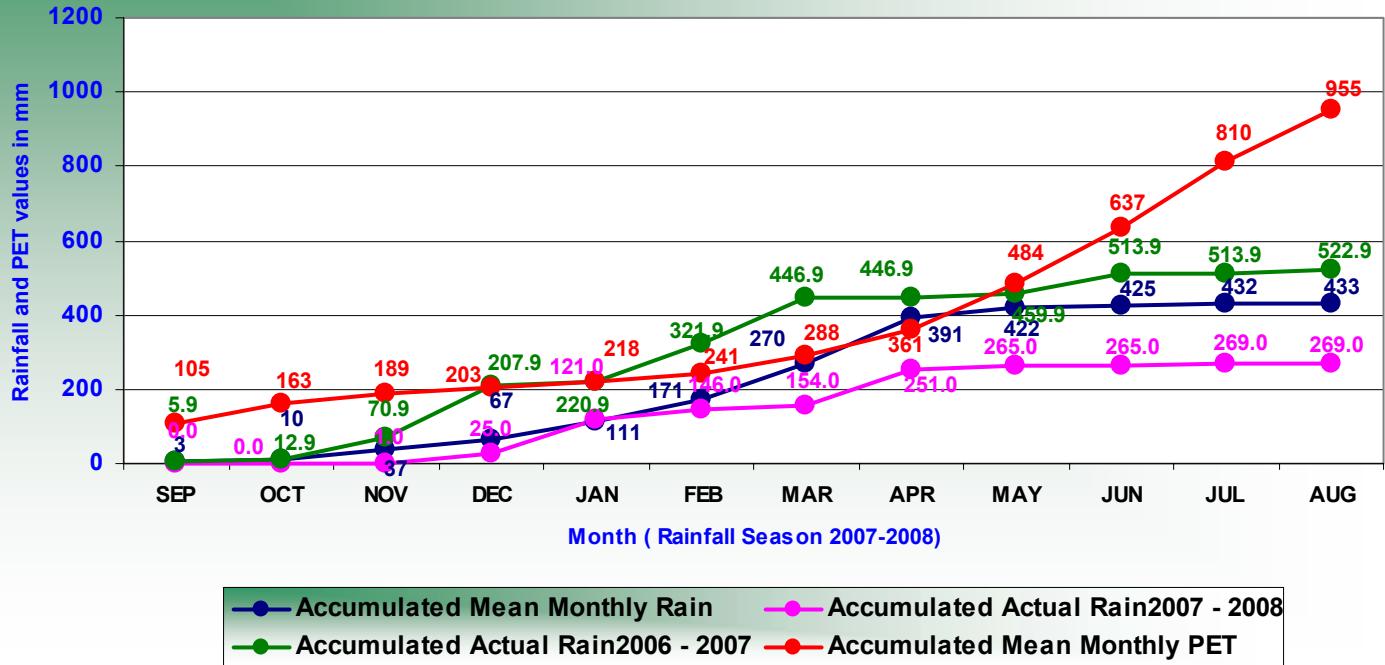
Kabul Airport: Comparison of Accumulated Mean Rain, Acc. Actual Rain 2007-2008
and Accumulated PET (Central)



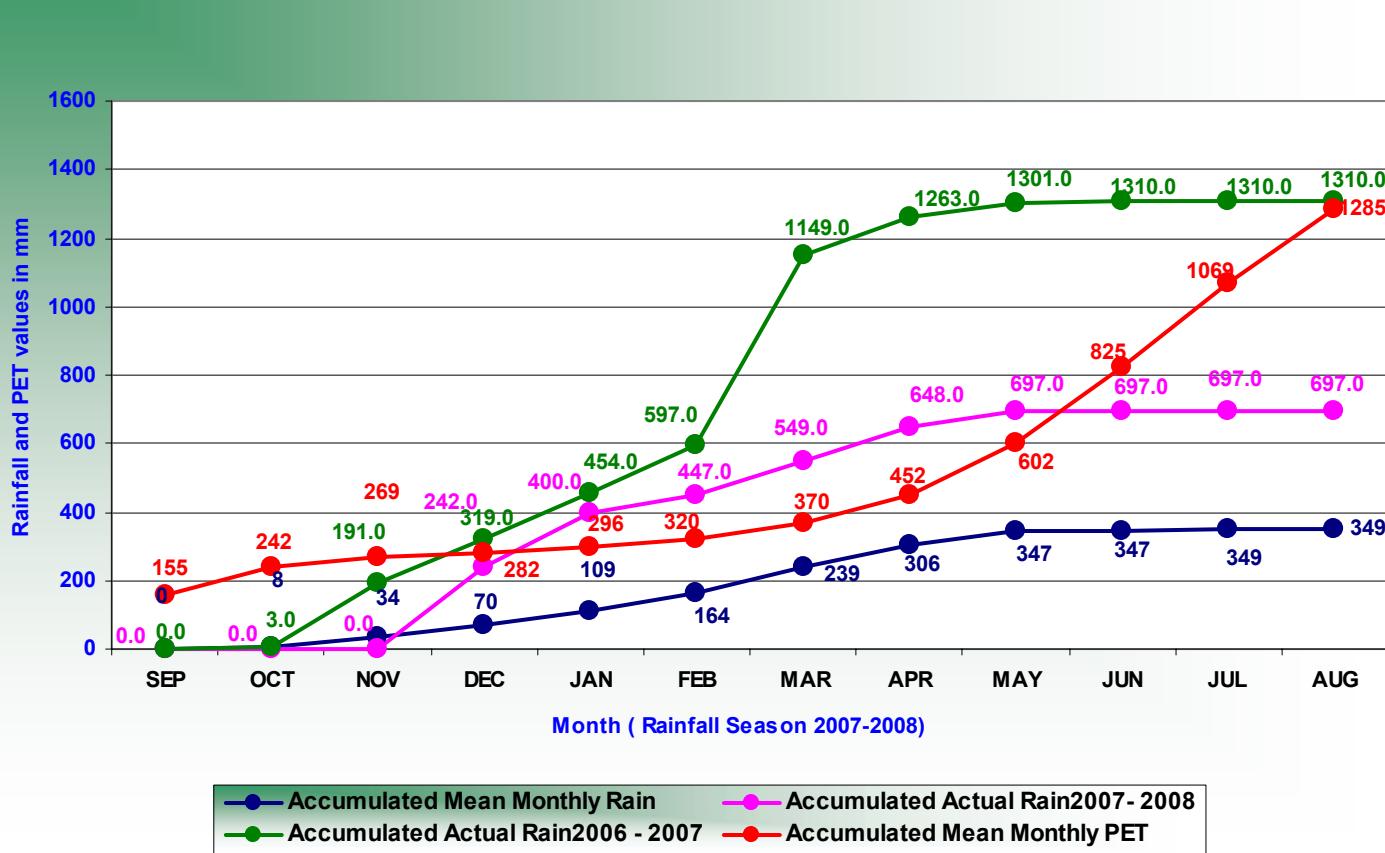
Kandahar Air Port: Comparison of Accumulated Mean Rain, Acc. Actual Rain 2007-2008
and Accumulated PET (South-W)

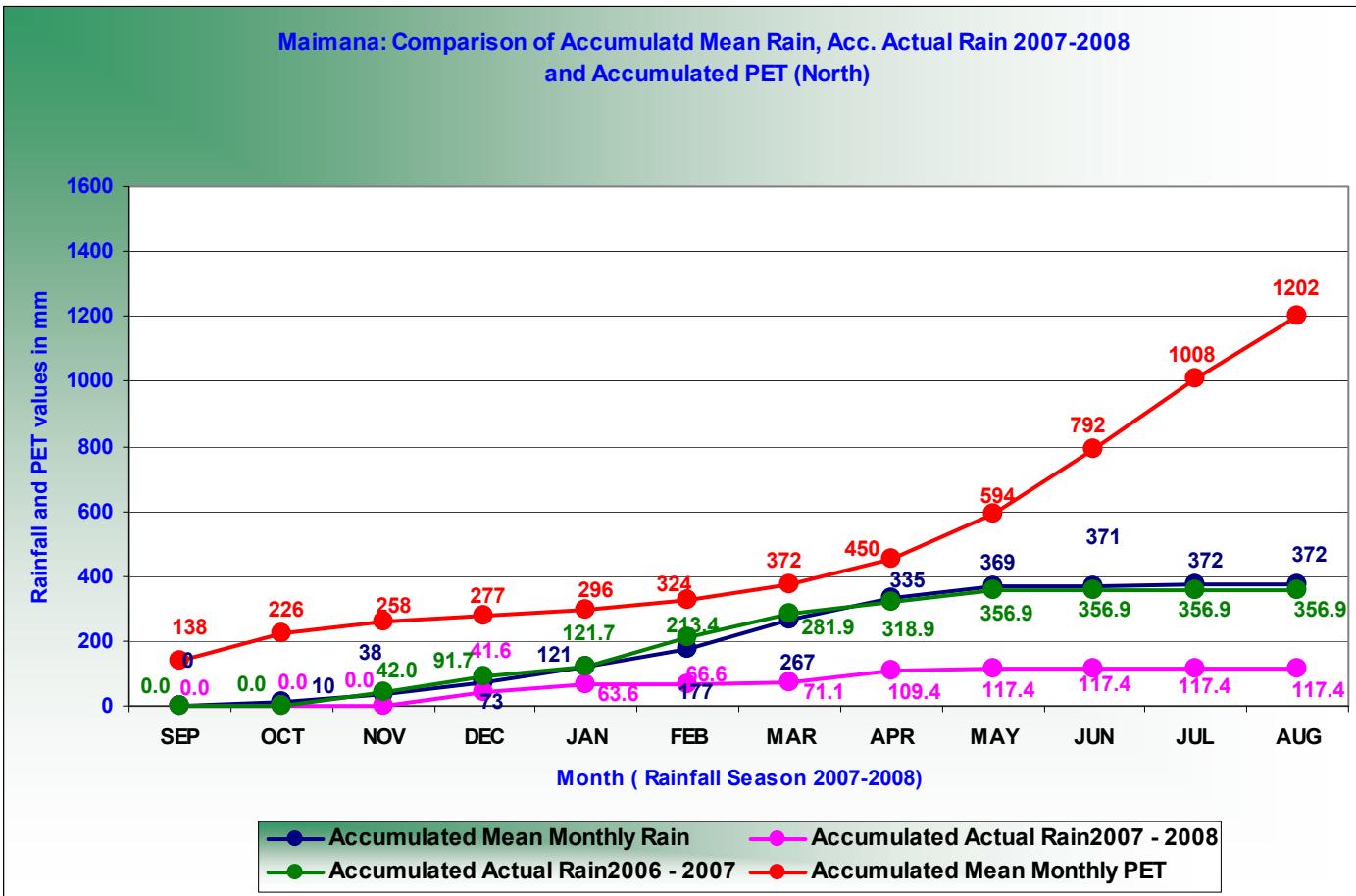
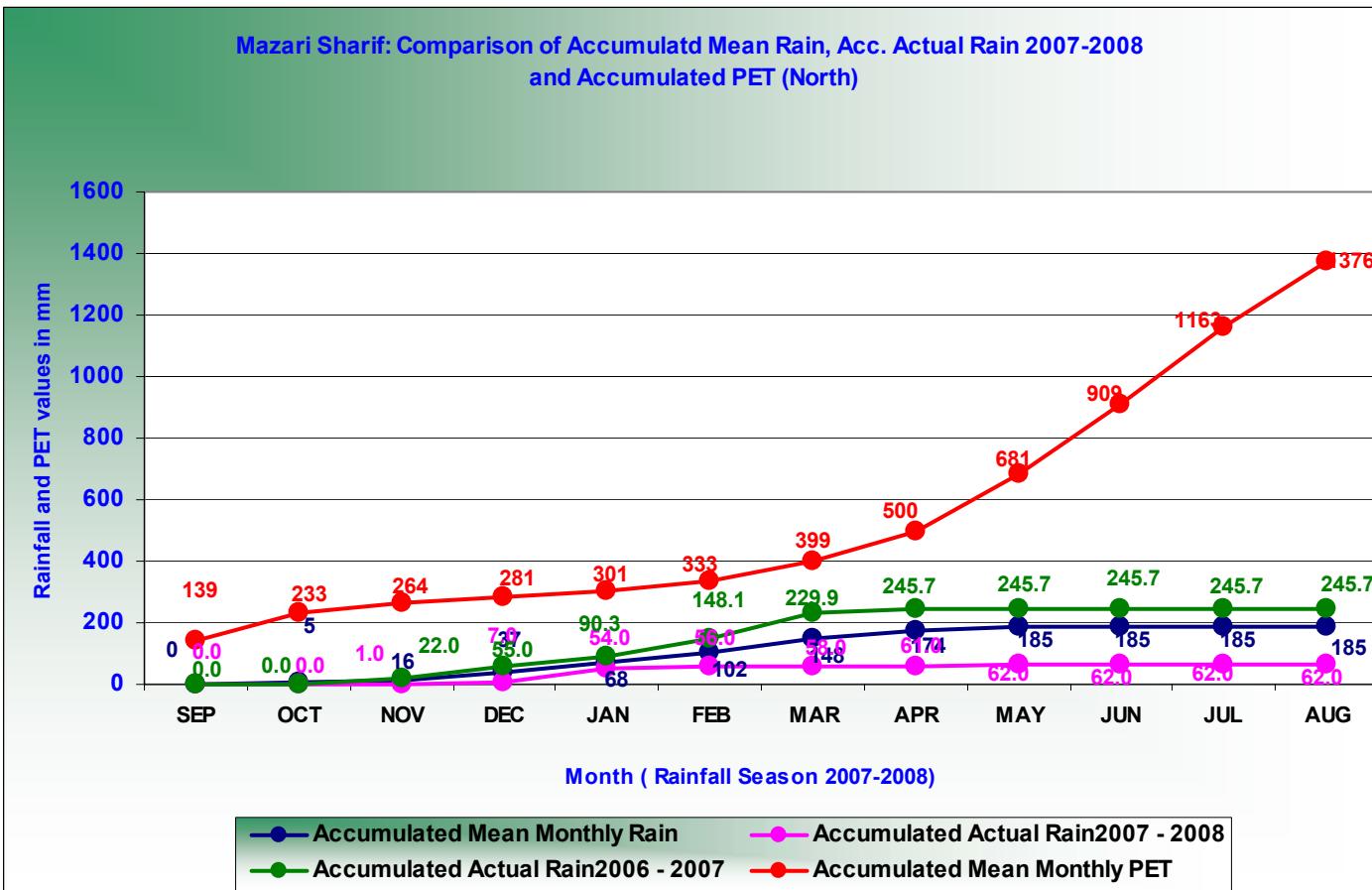


Karizmir: Comparison of Accumulated Mean Rain, Acc. Actual Rain 2007-2008
and Accumulated PET (Central)

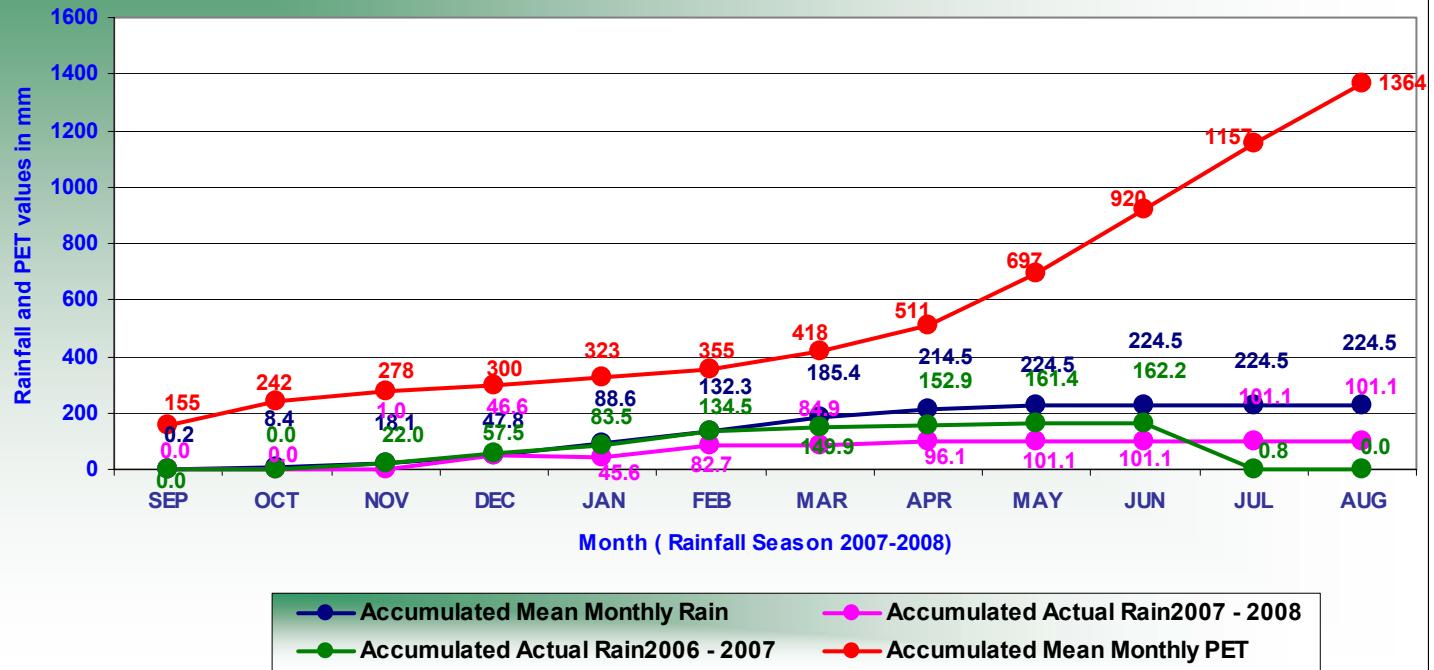


Kunduz: Comparison of Accumulated Mean Rain, Acc. Actual Rain 2007-2008
and Accumulated PET (North-E)

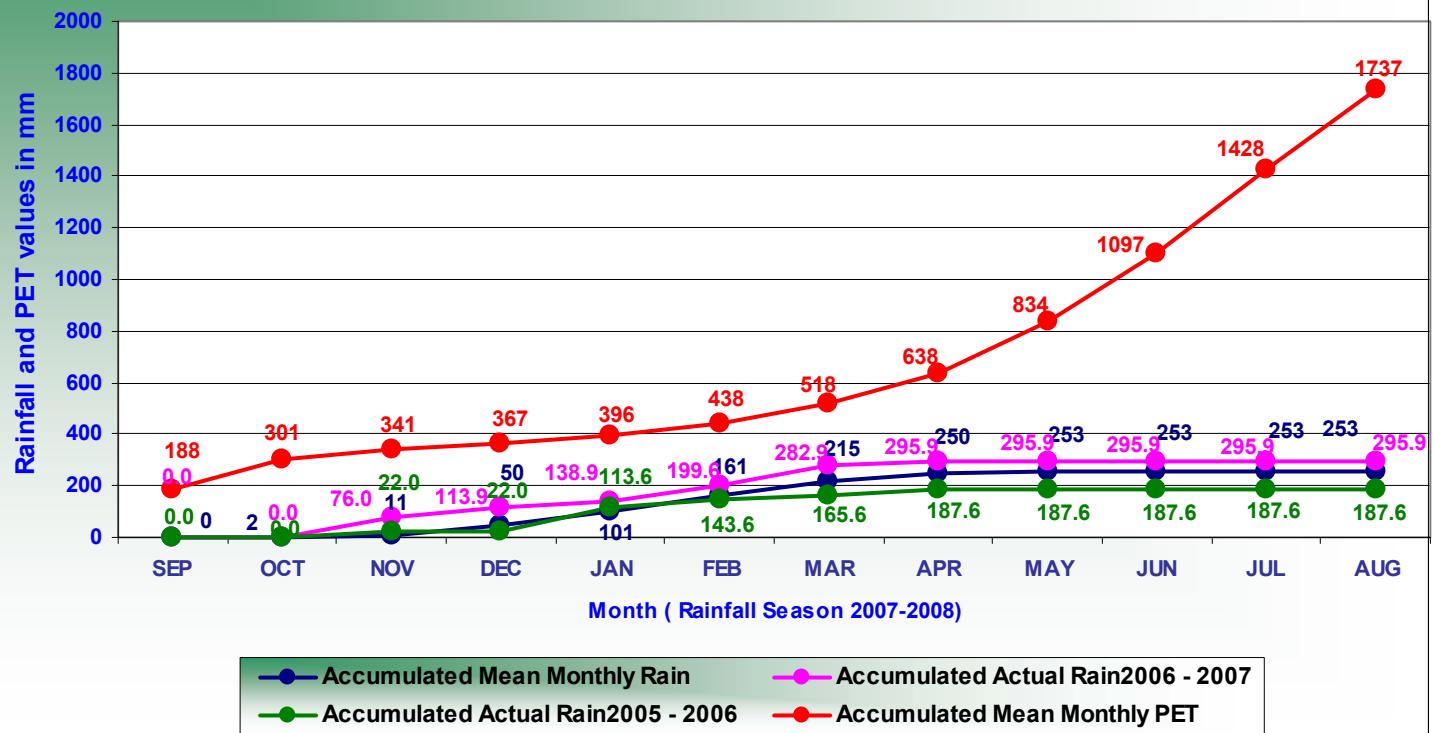




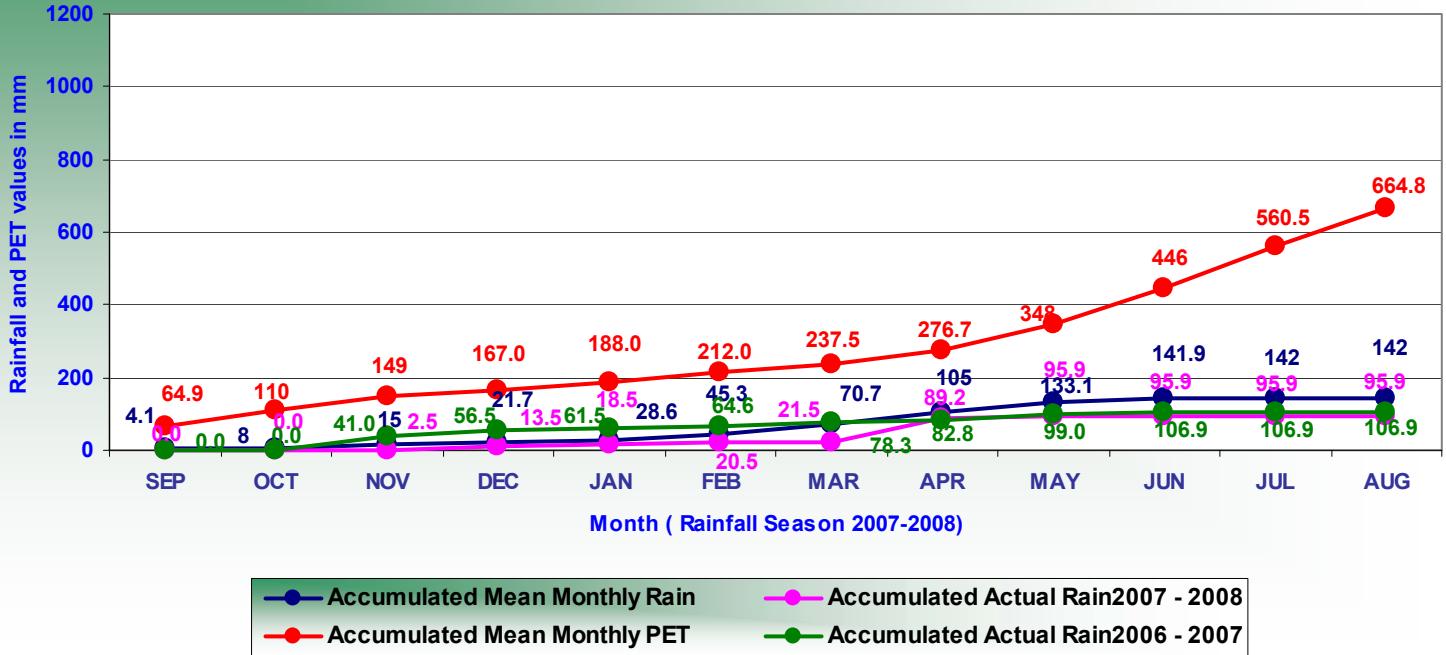
Sheberghan: Comparison of Accumulated Mean Rain, Acc. Actual Rain 2007-2008
and Accumulated PET (North)



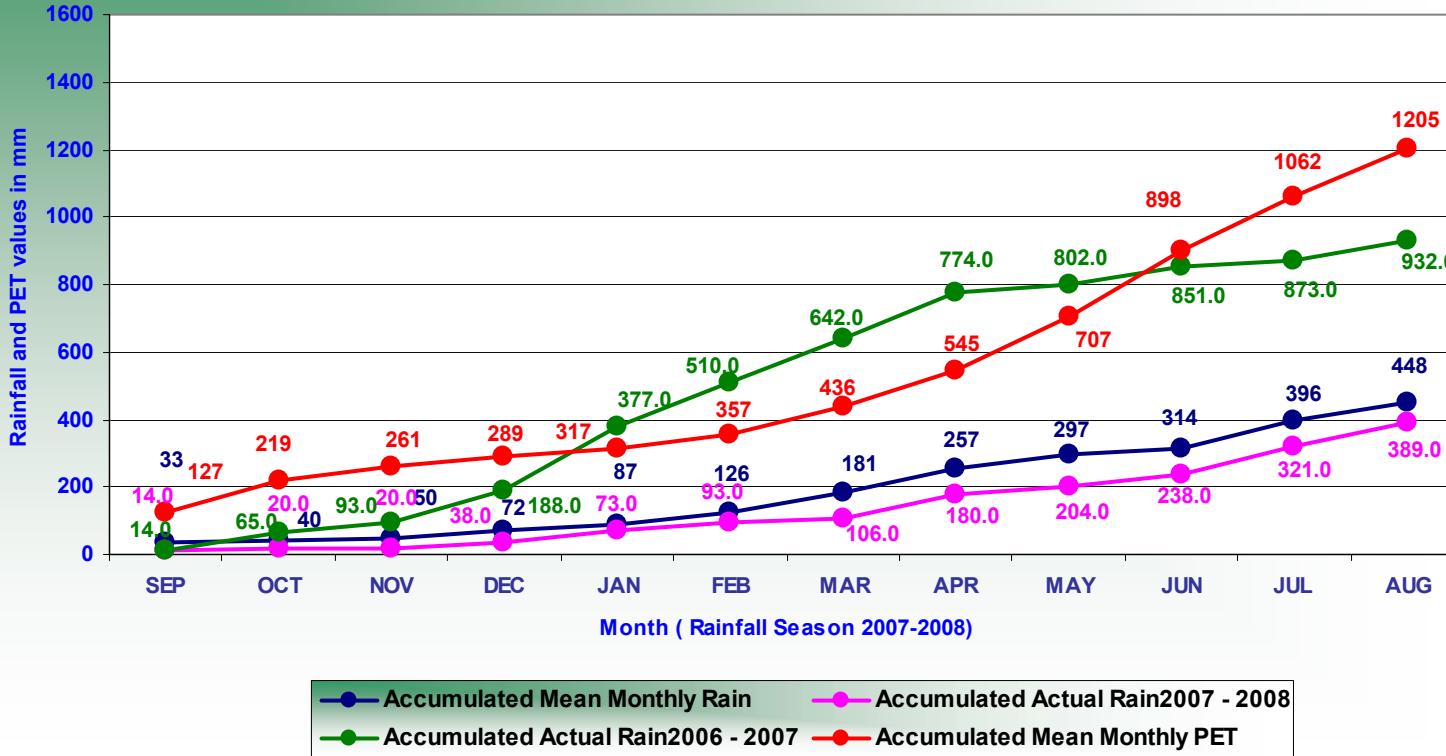
Hirat: Comparison of Accumulated Mean Rain, Acc. Actual Rain 2007-2008
and Accumulated PET (West)



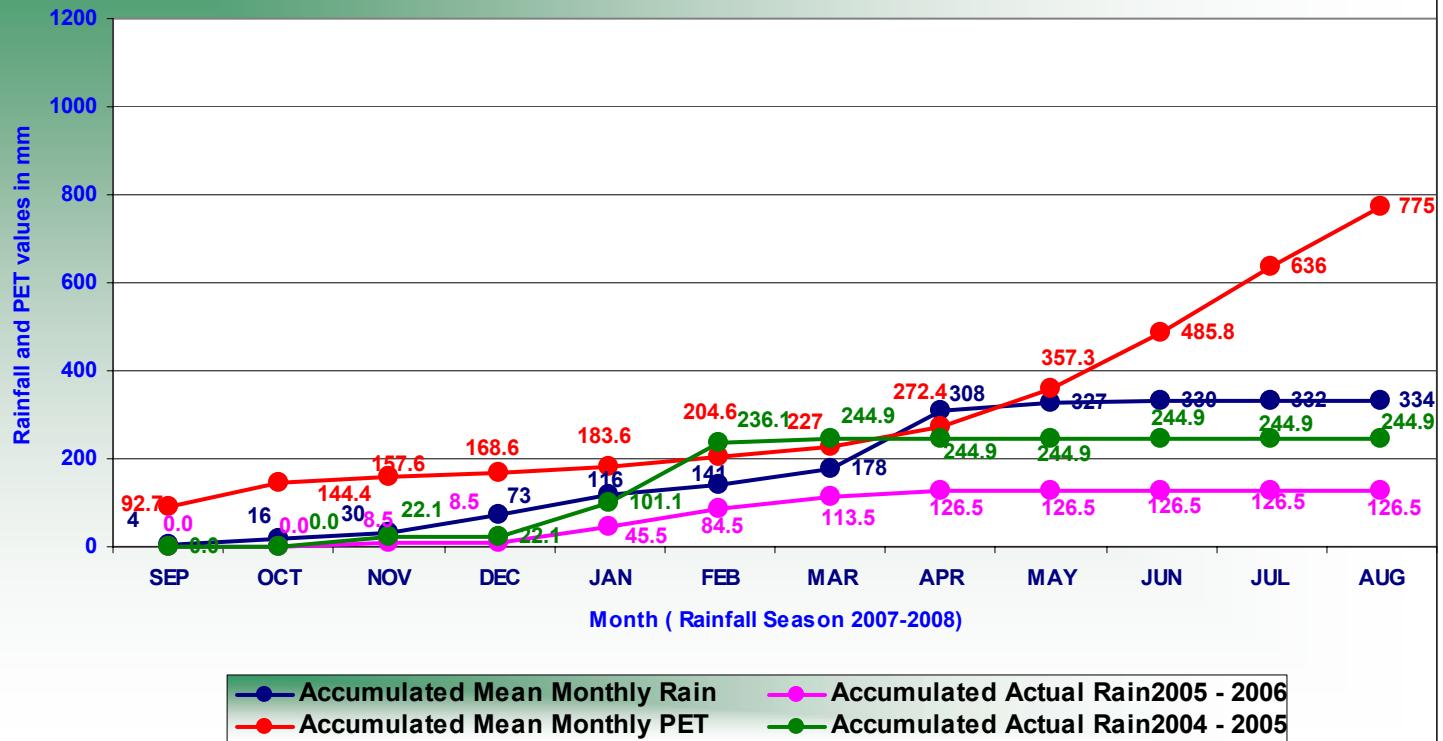
Bamyan: Comparison of Accumulated Mean Rain, Acc. Actual Rain 2007-2008
and Accumulated PET (East-Central)



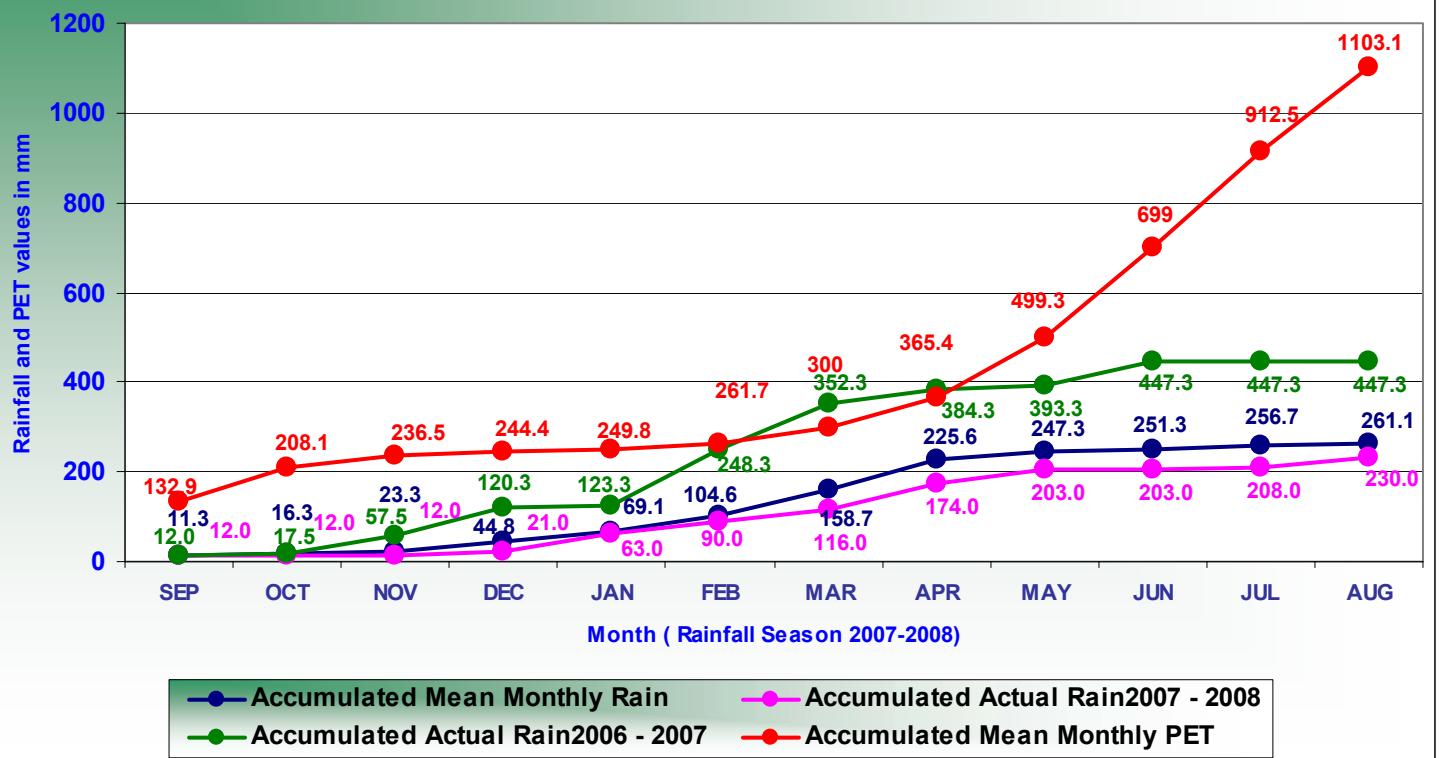
Khost: Comparison of Accumulated Mean Rain, Acc. Actual Rain 2007-2008
and Accumulated PET (South)



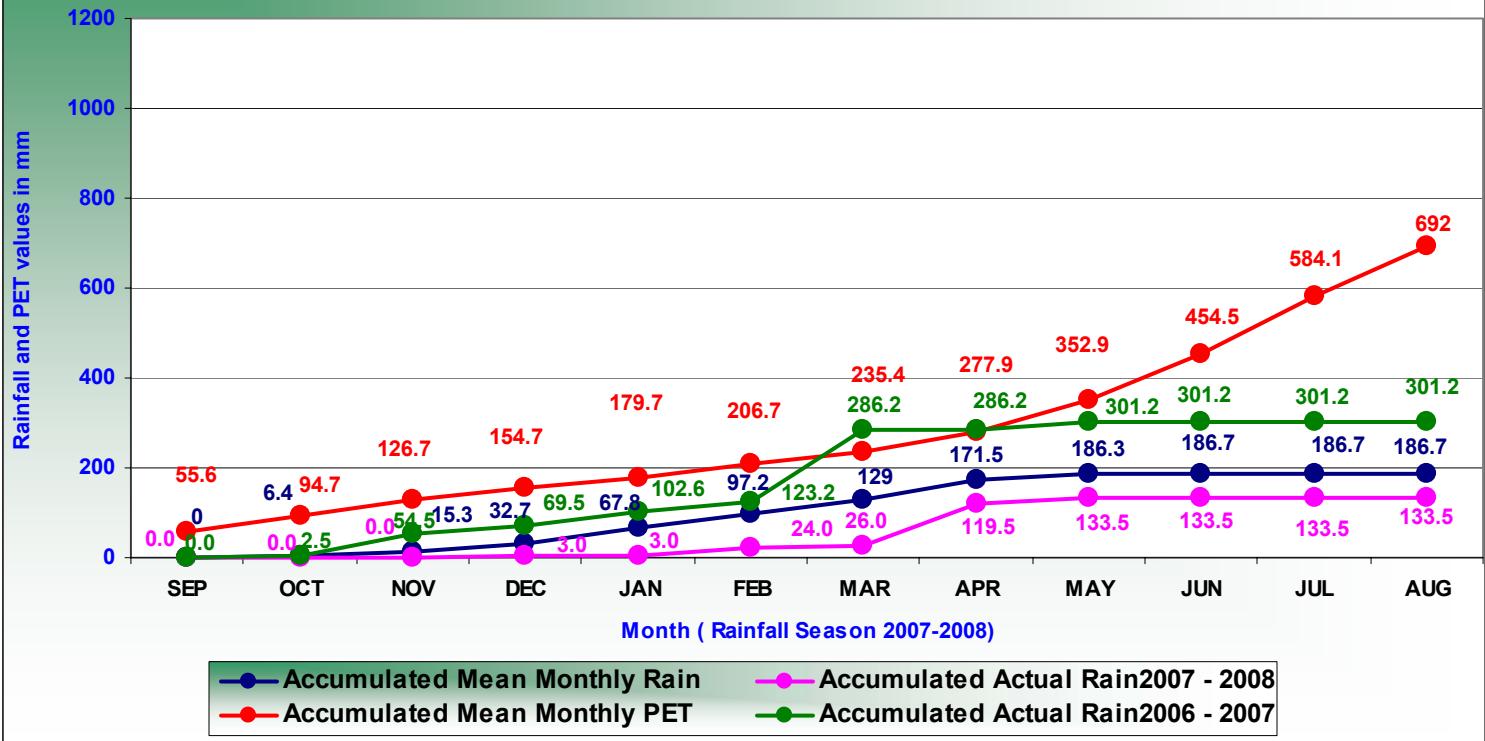
Kalat: Comparison of Accumulated Mean Rain, Acc. Actual Rain 2007-2008
and Accumulated PET (South-W)



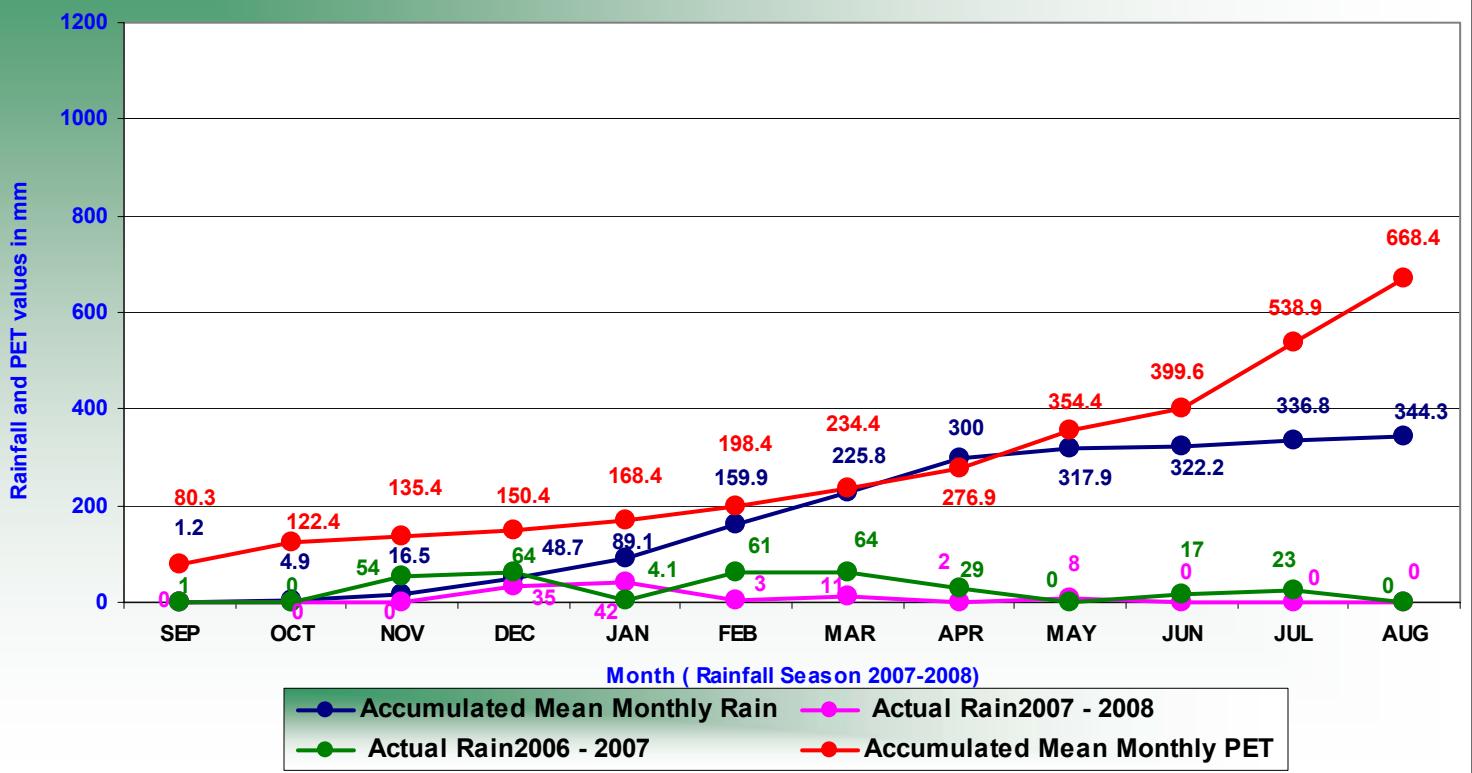
Laghman: Comparison of Accumulated Mean Rain, Acc. Actual Rain 2007-2008
and Accumulated PET (East)



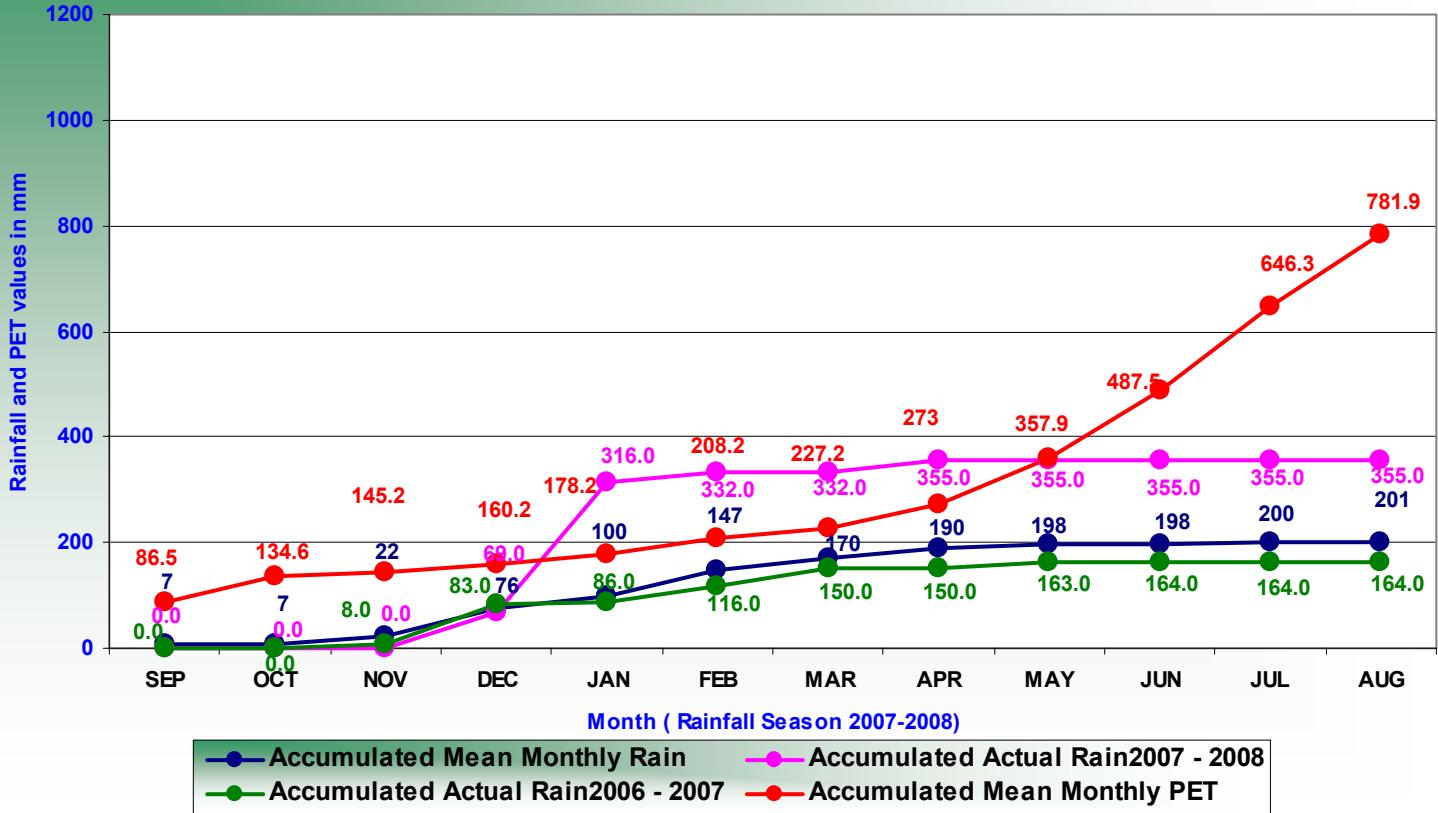
Chakhcharan: Comparison of Accumulated Mean Rain, Acc. Actual Rain 2007-2008
and Accumulated PET (West)



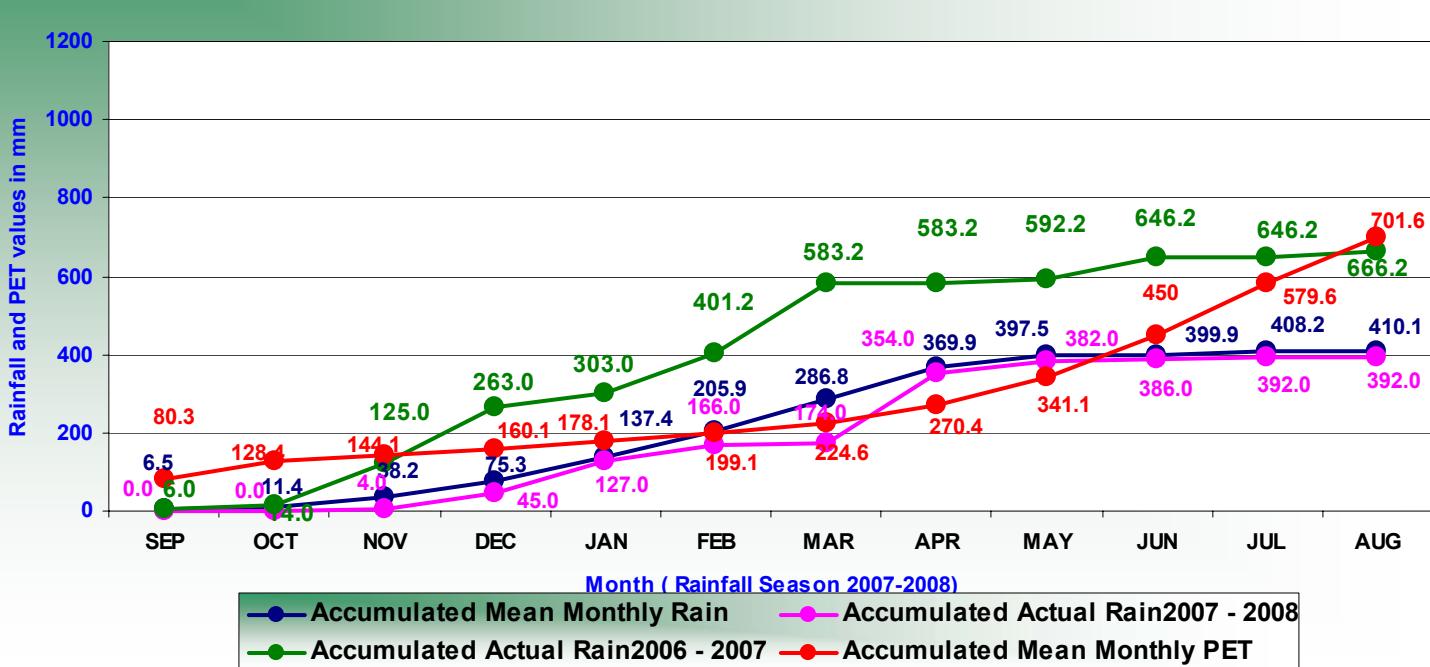
GARDIZ: Comparison of Accumulated Mean Rain, Acc. Actual Rain 2007-2008
and Accumulated PET (South)



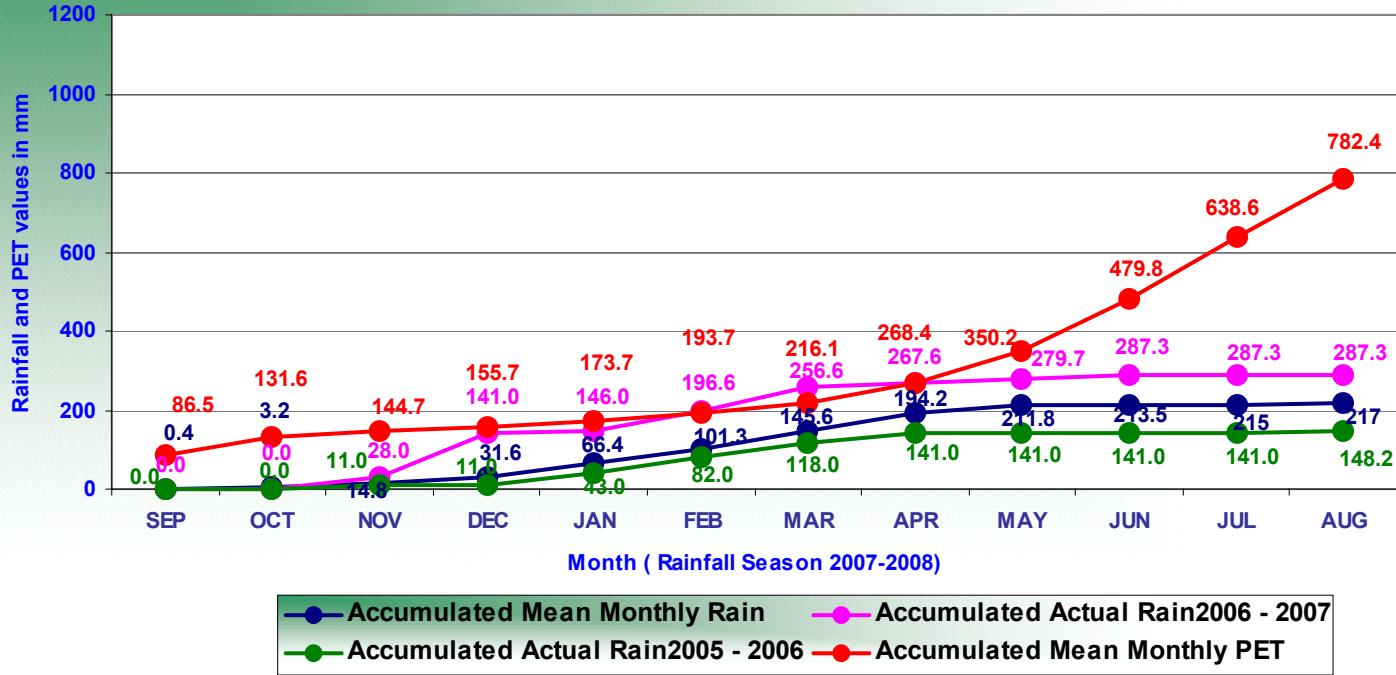
Moqur: Comparison of Accumulated Mean Rain, Acc. Actual Rain 2007-2008
and Accumulated PET (South)



Paghman: Comparison of Accumulated Mean Rain, Acc. Actual Rain 2007-2008
and Accumulated PET (Central)

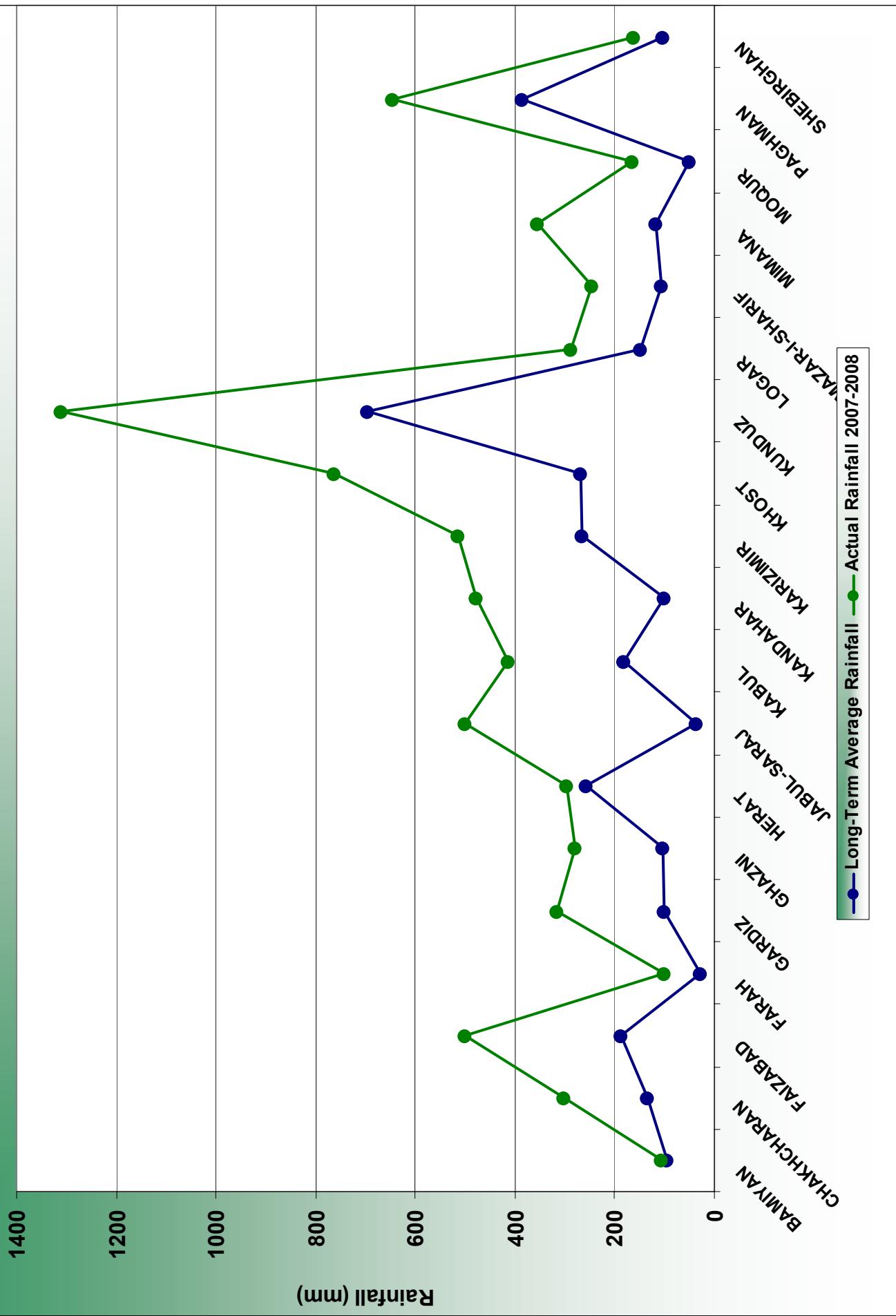


**Logar: Comparison of Accumulatd Mean Rain, Acc. Actual Rain 2007-2008
and Accumulated PET (Central)**

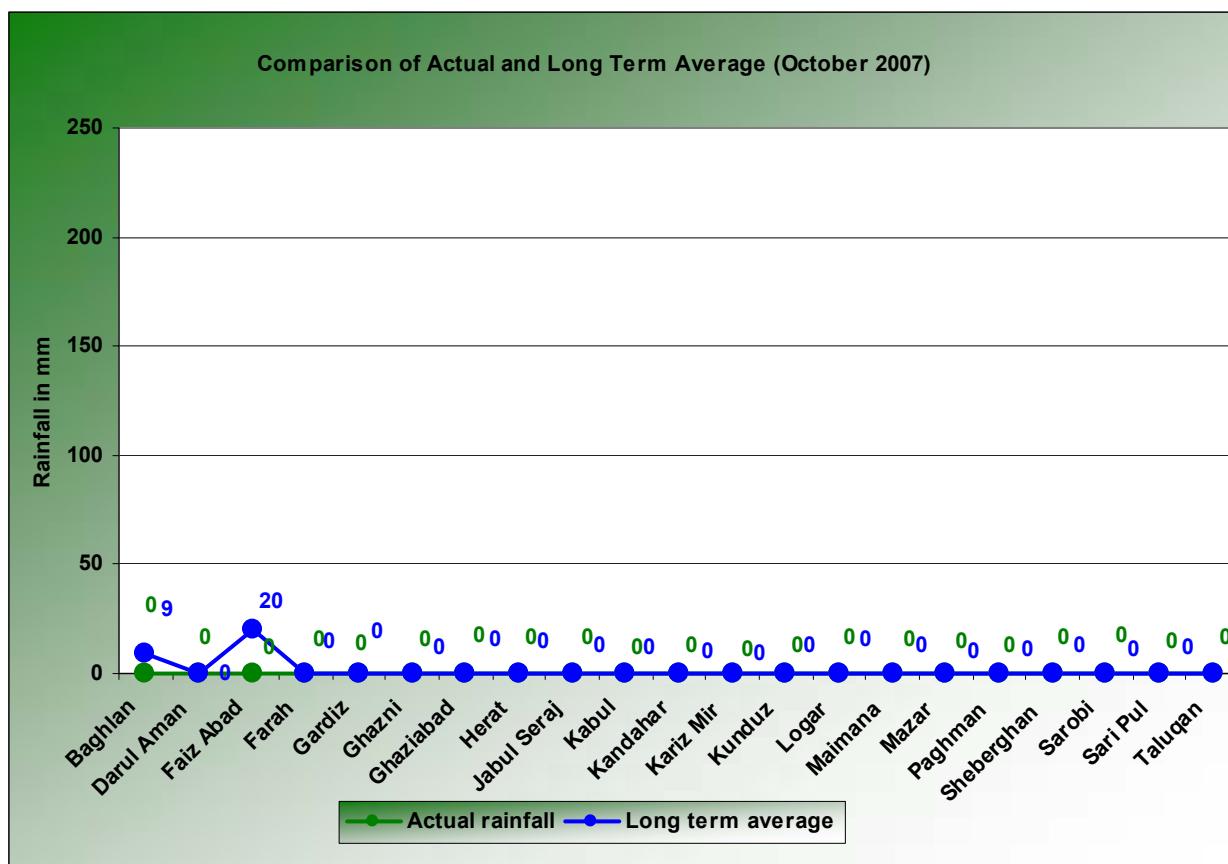
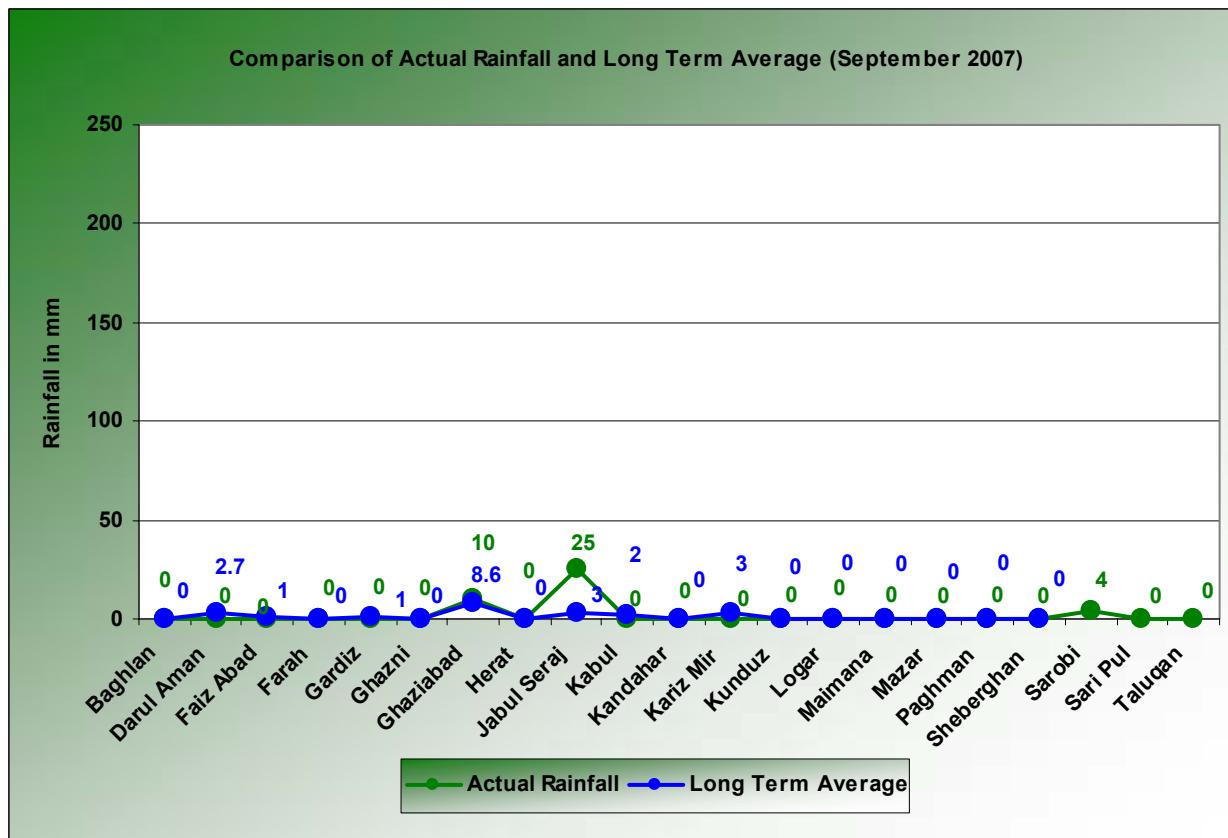


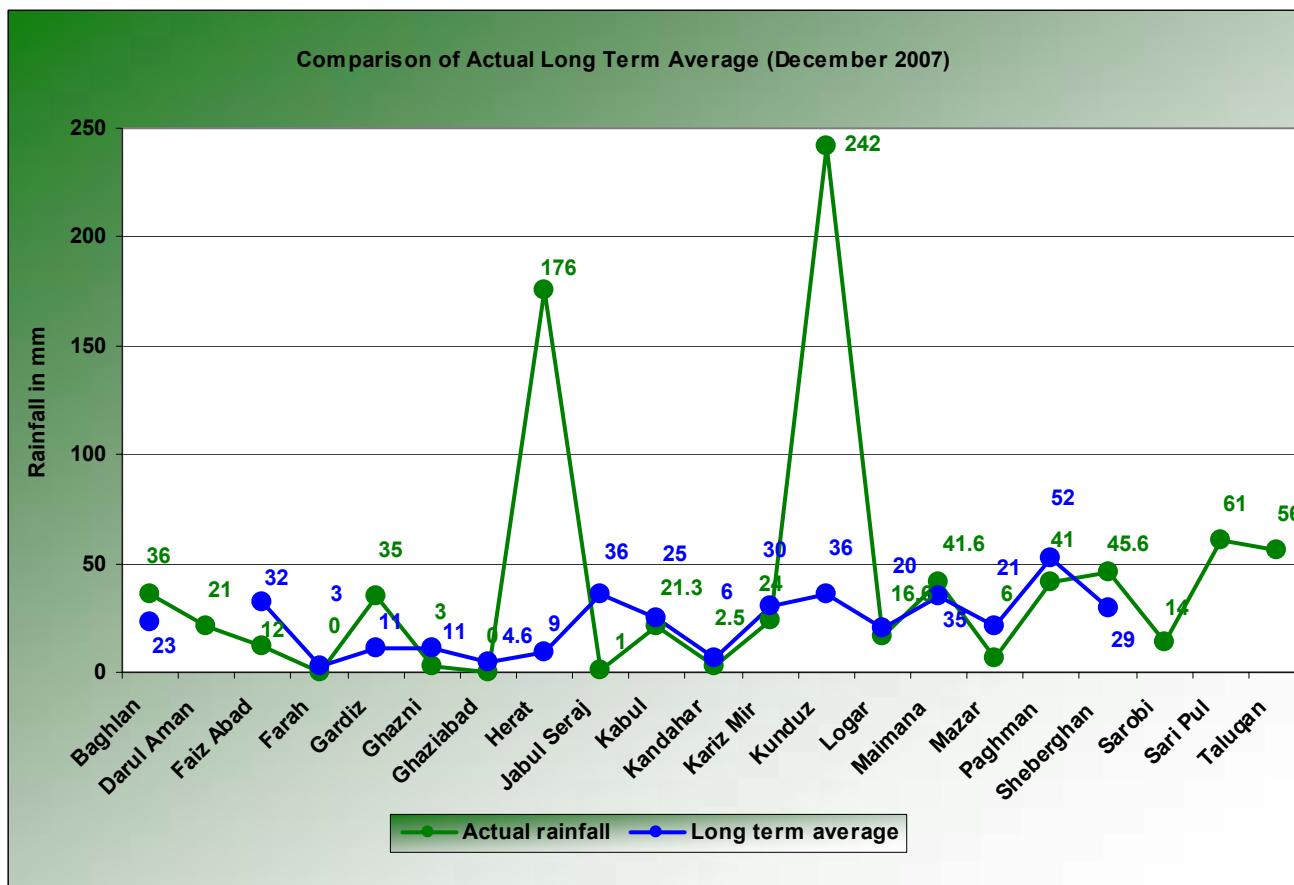
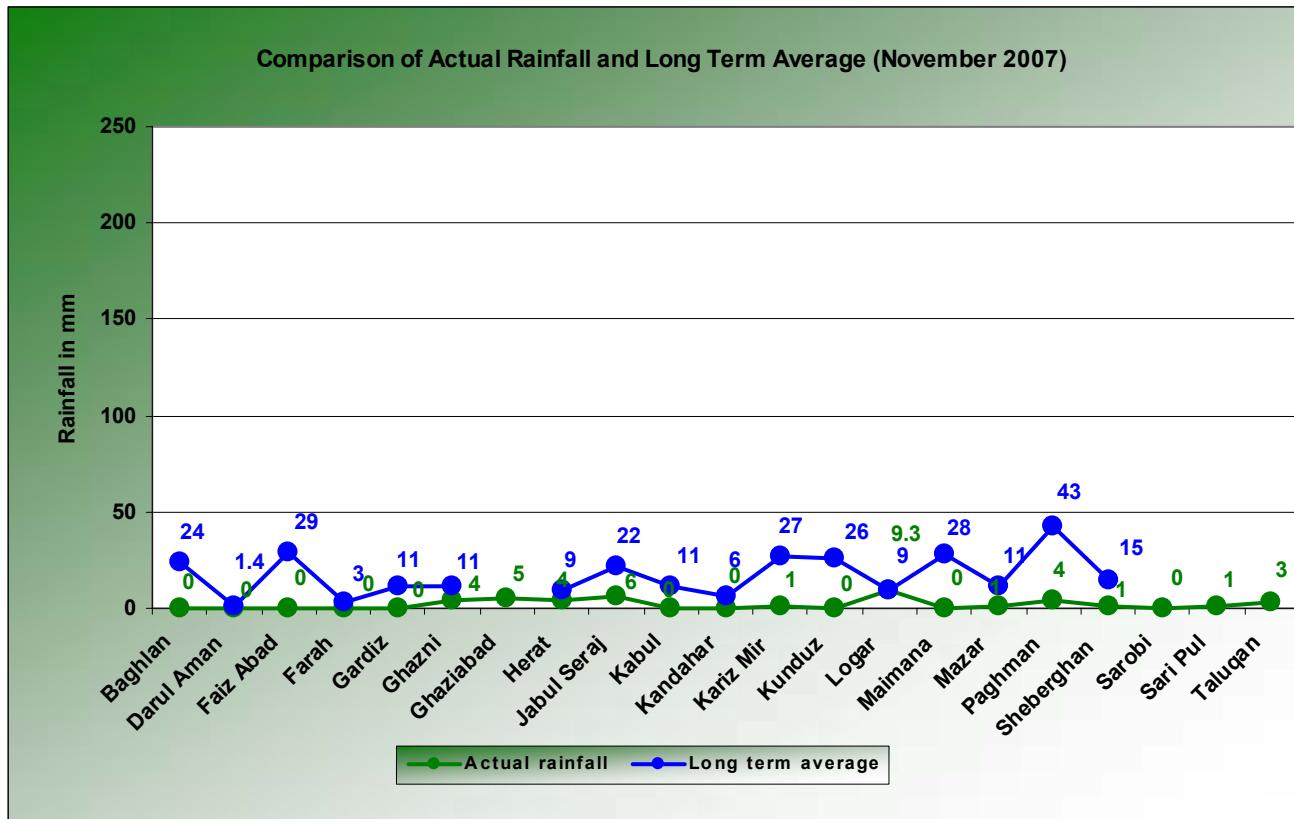
Annual Rainfall (mm) 2007- 2008
Compared to
Long-Term Average

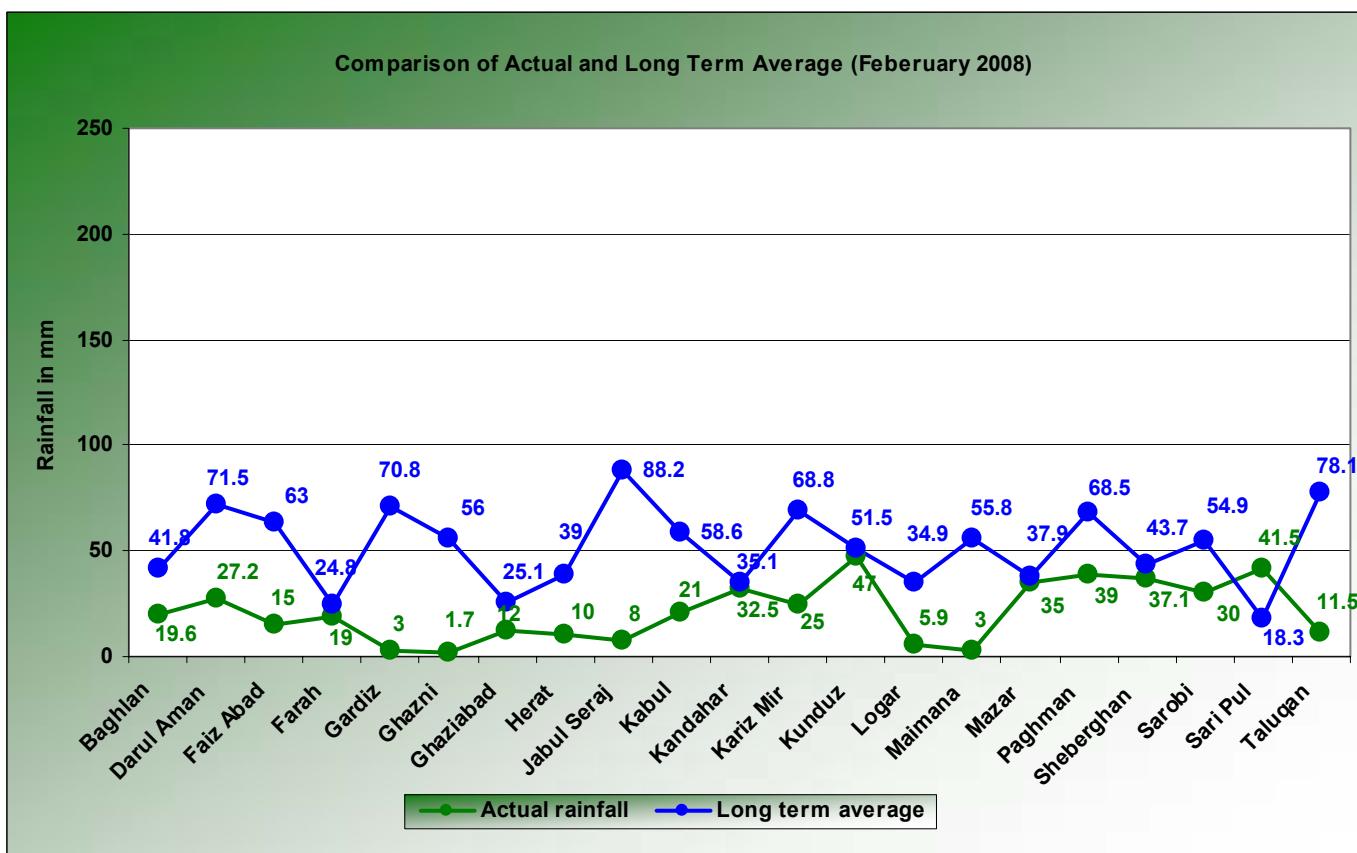
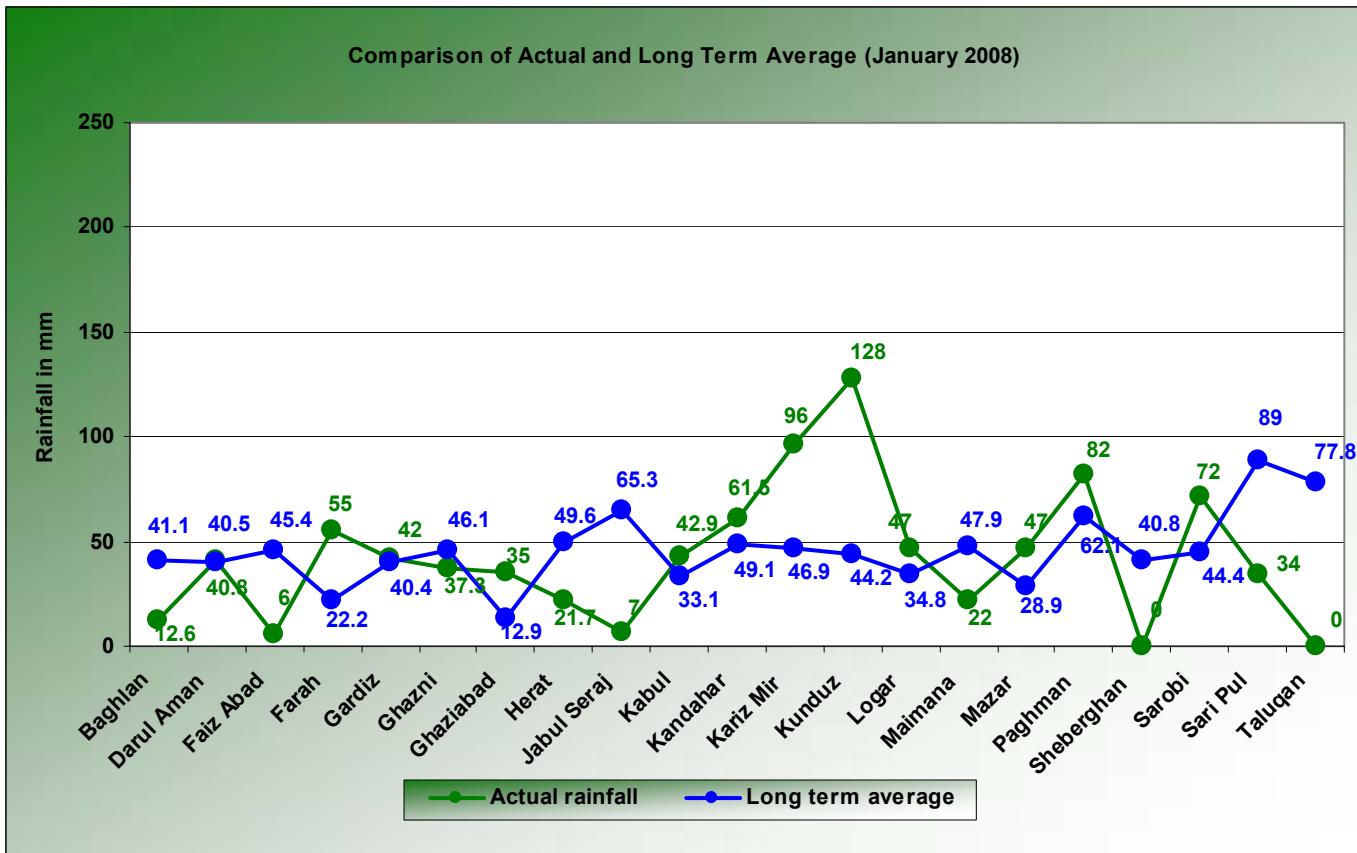
Comparison of Actual Yearly Rainfall(2007-2008) with Long Term Average

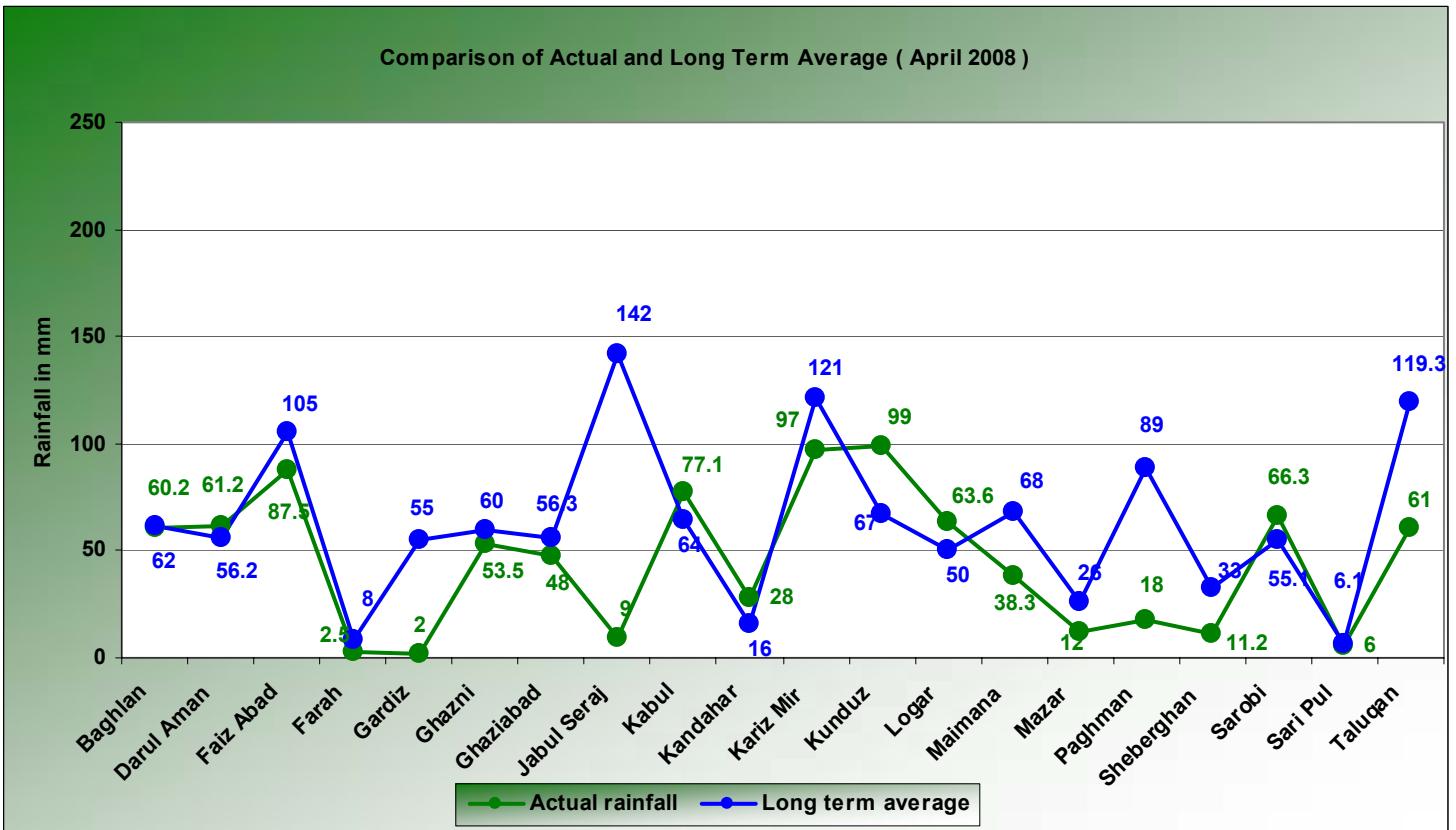
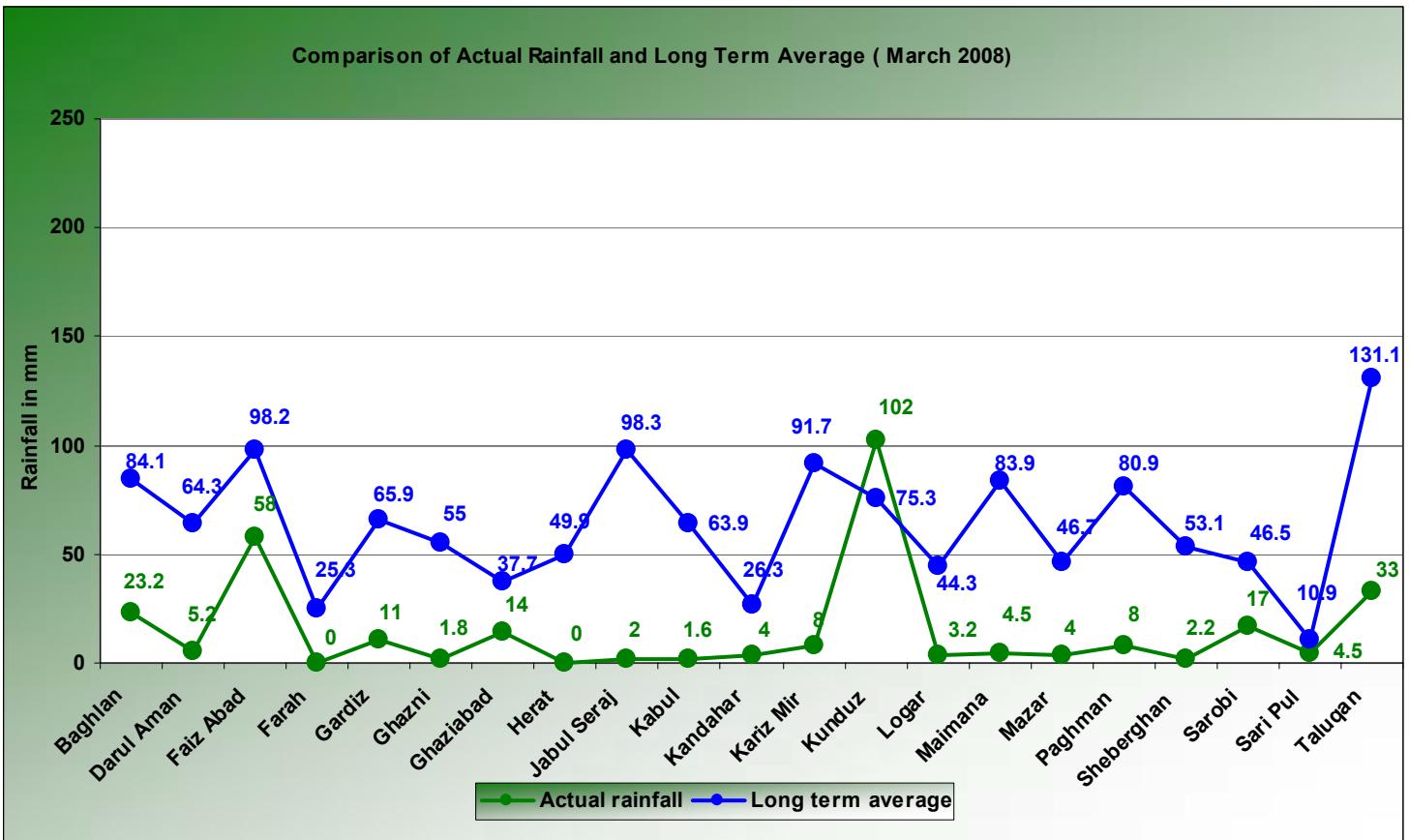


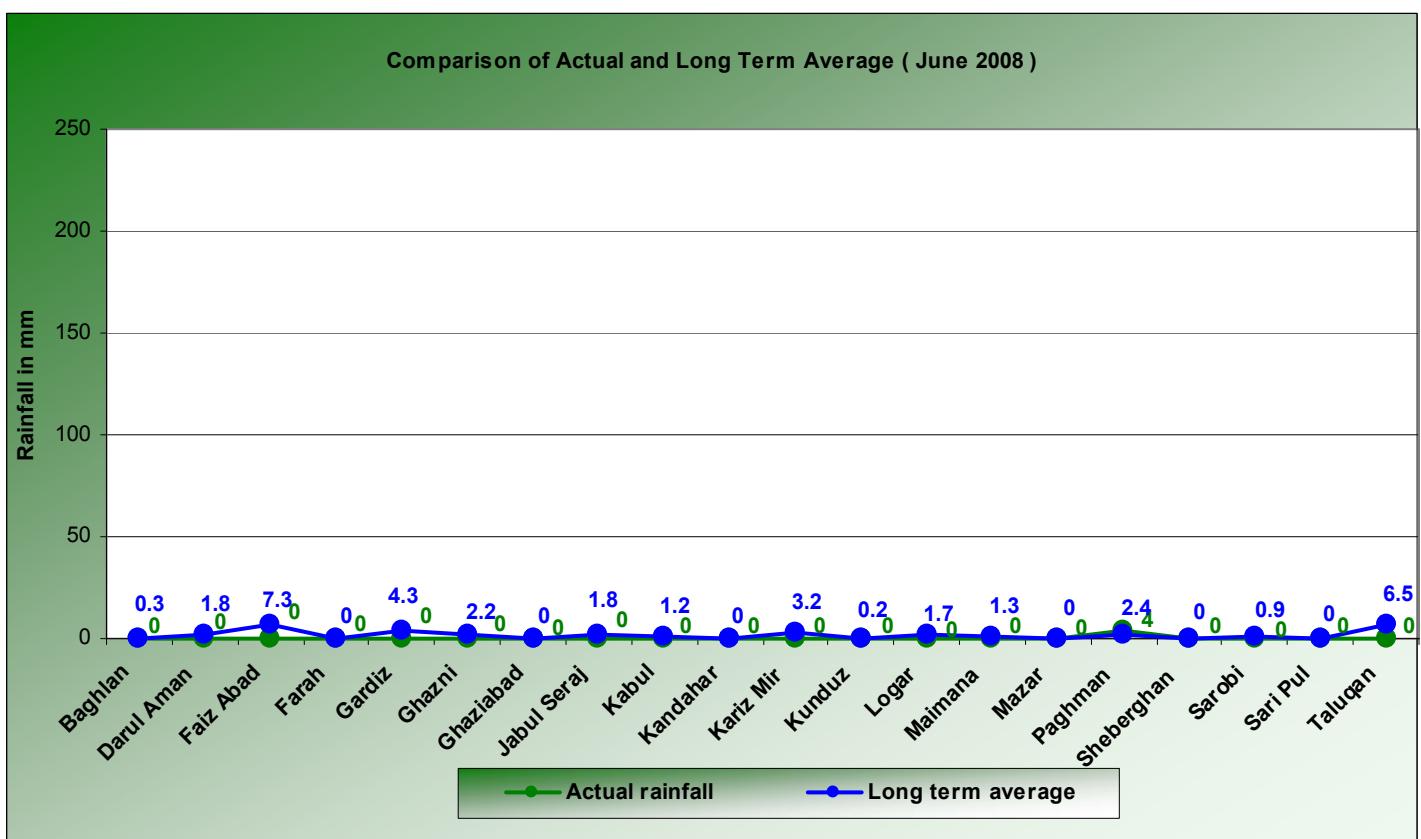
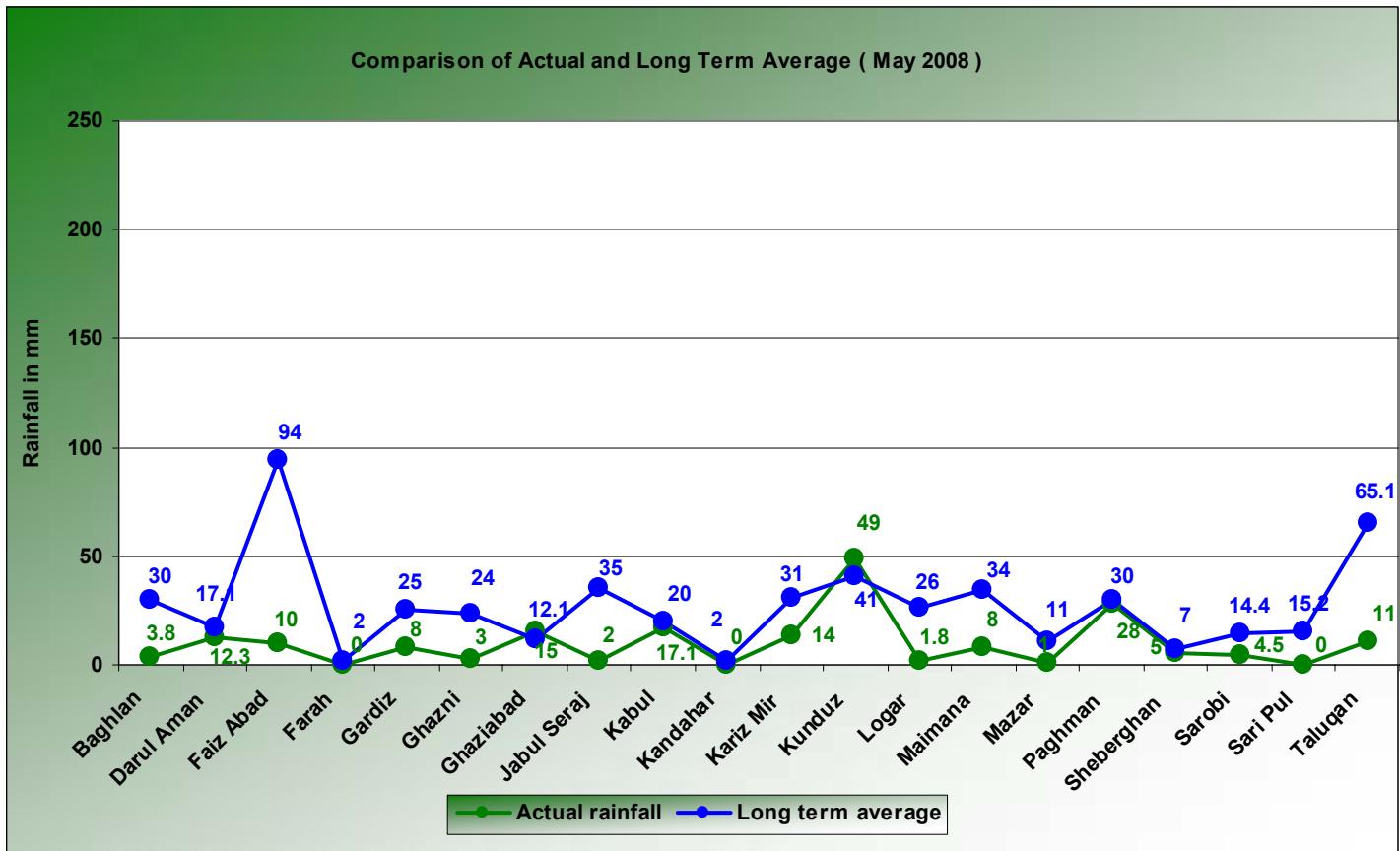
Monthly Rainfall Comparison
With
Long Term Average (in percentage)

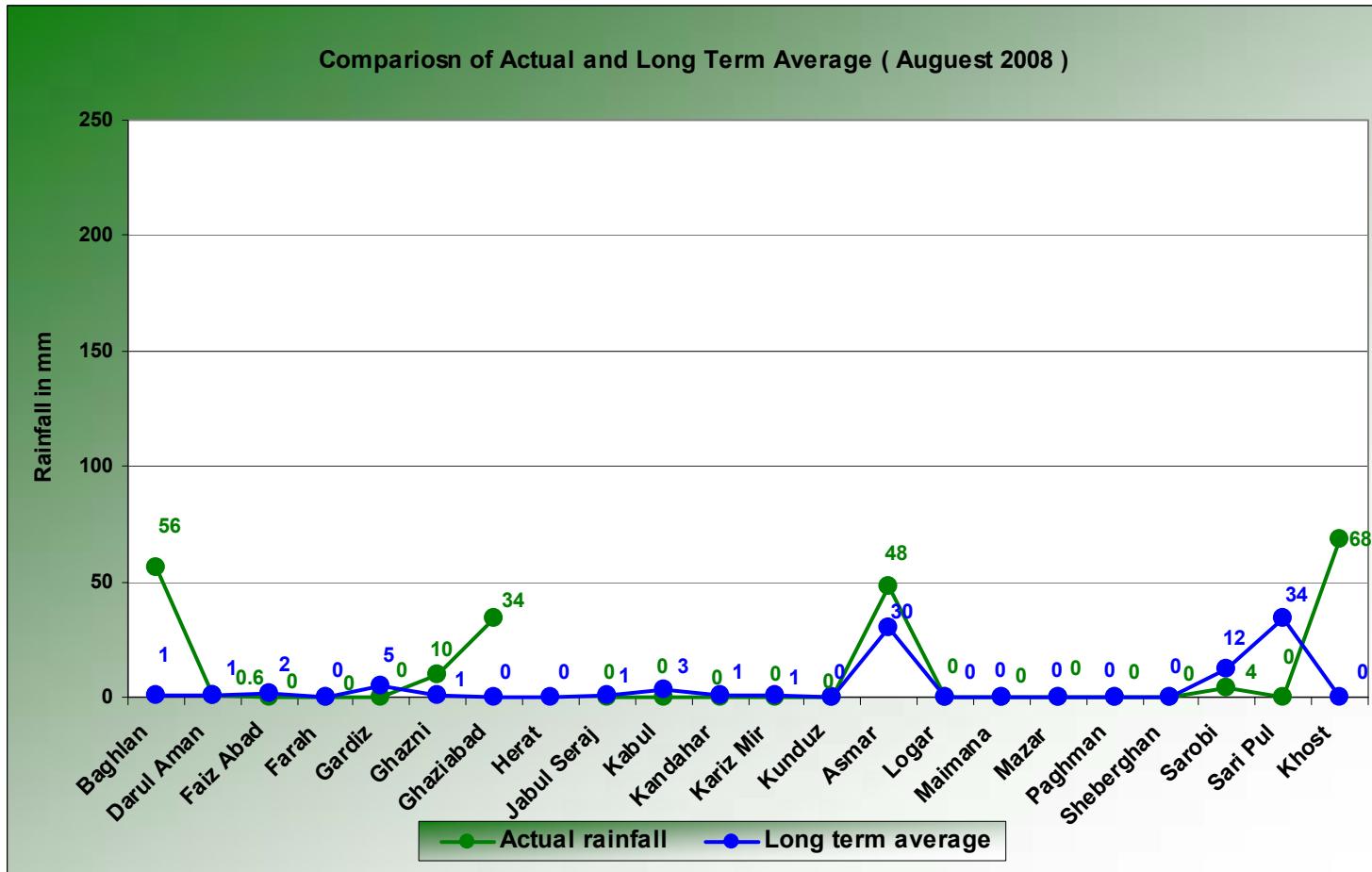
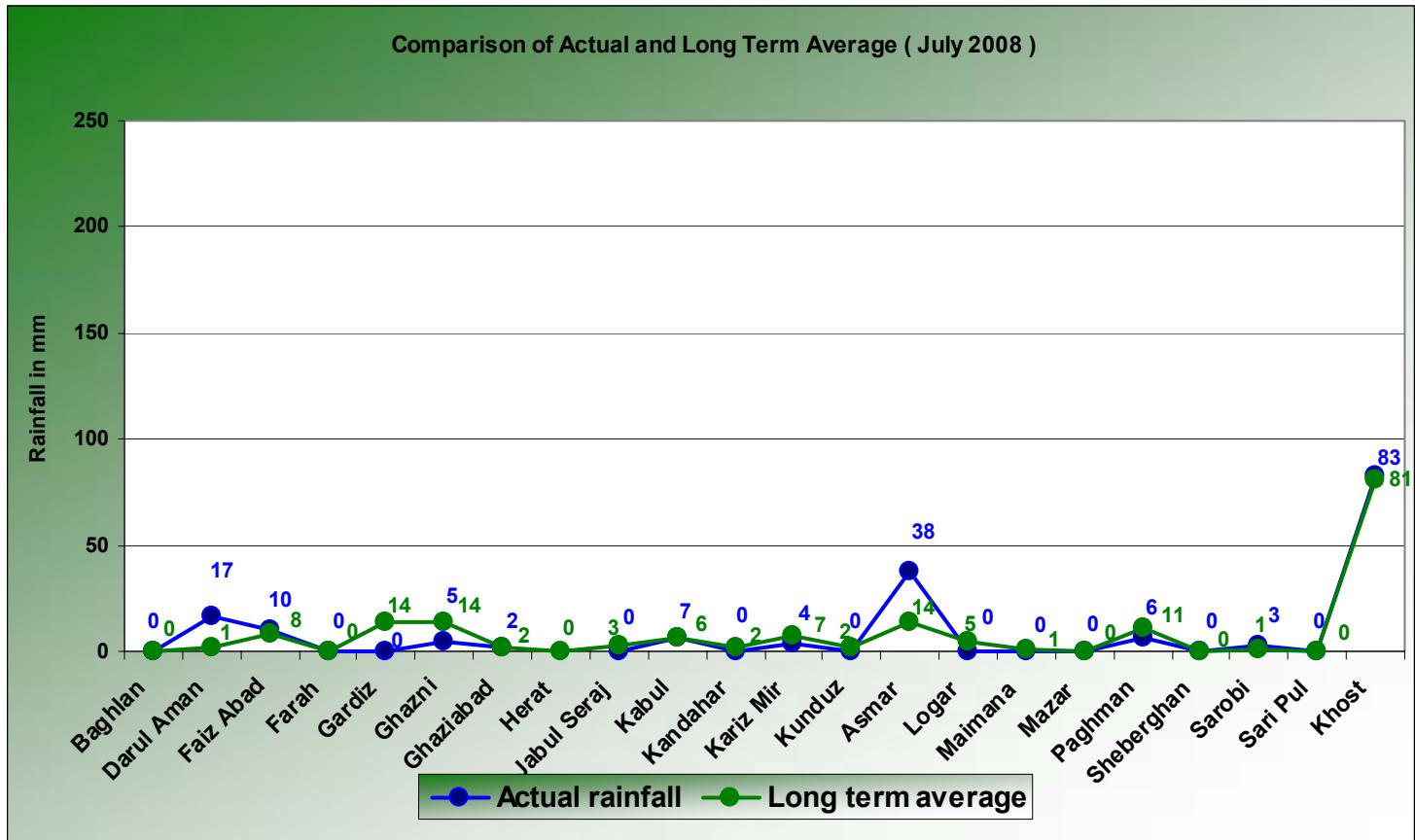








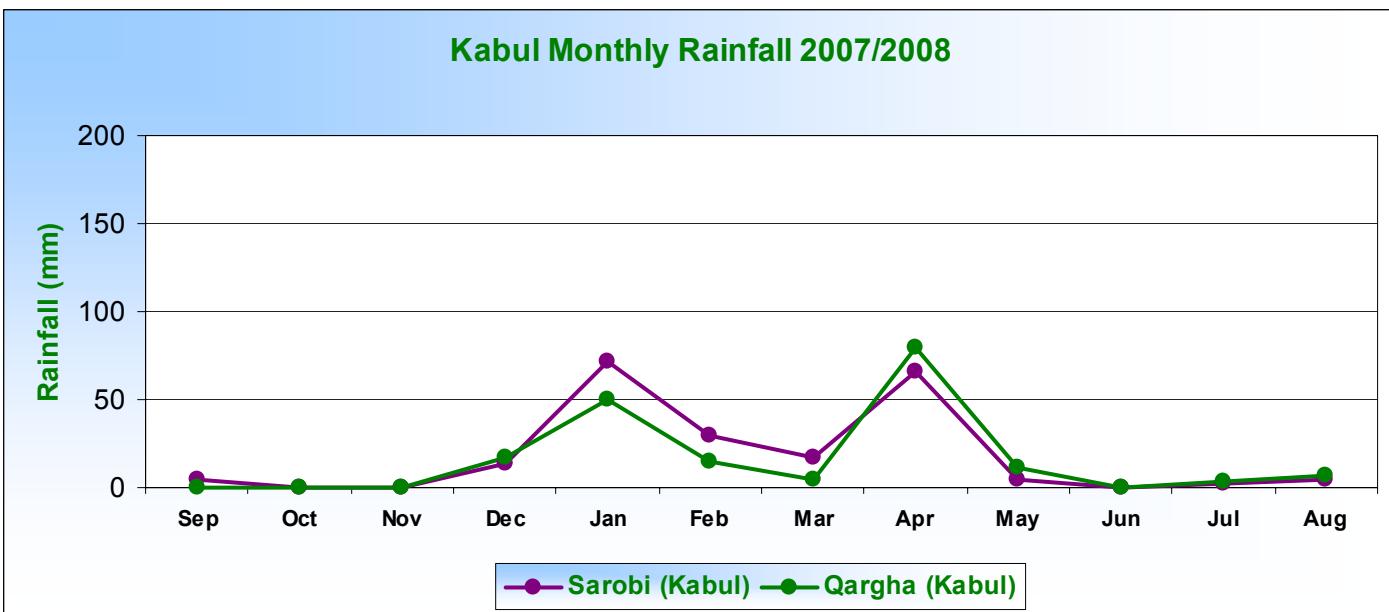
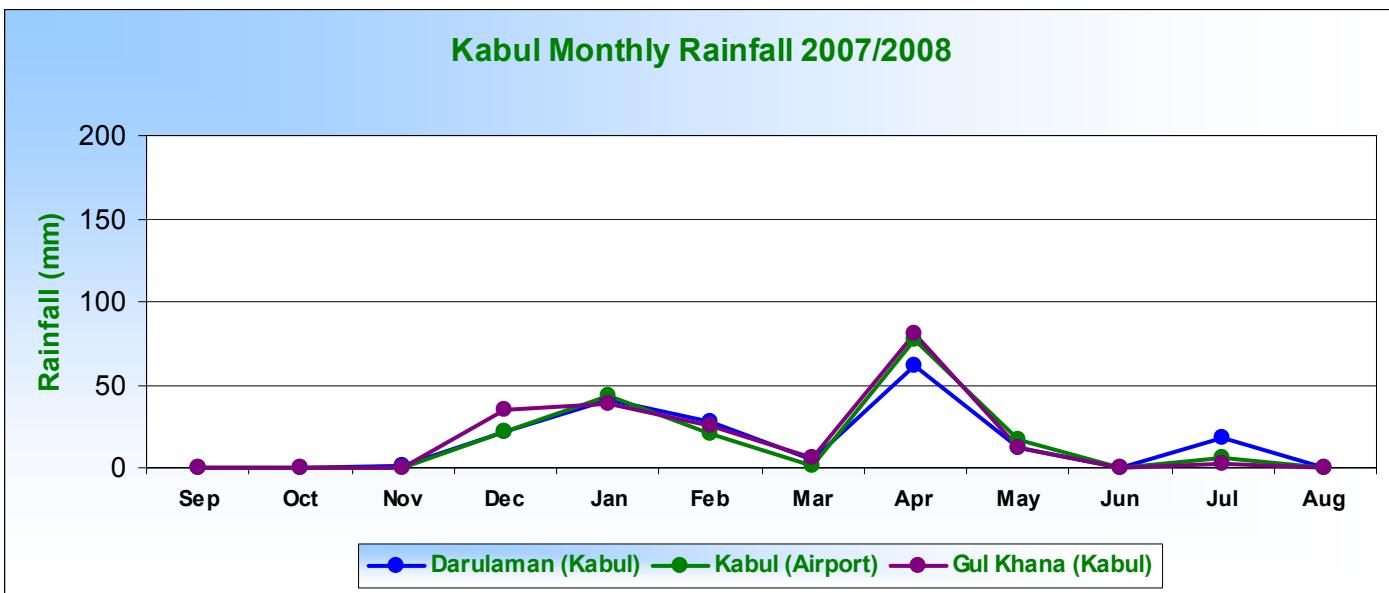
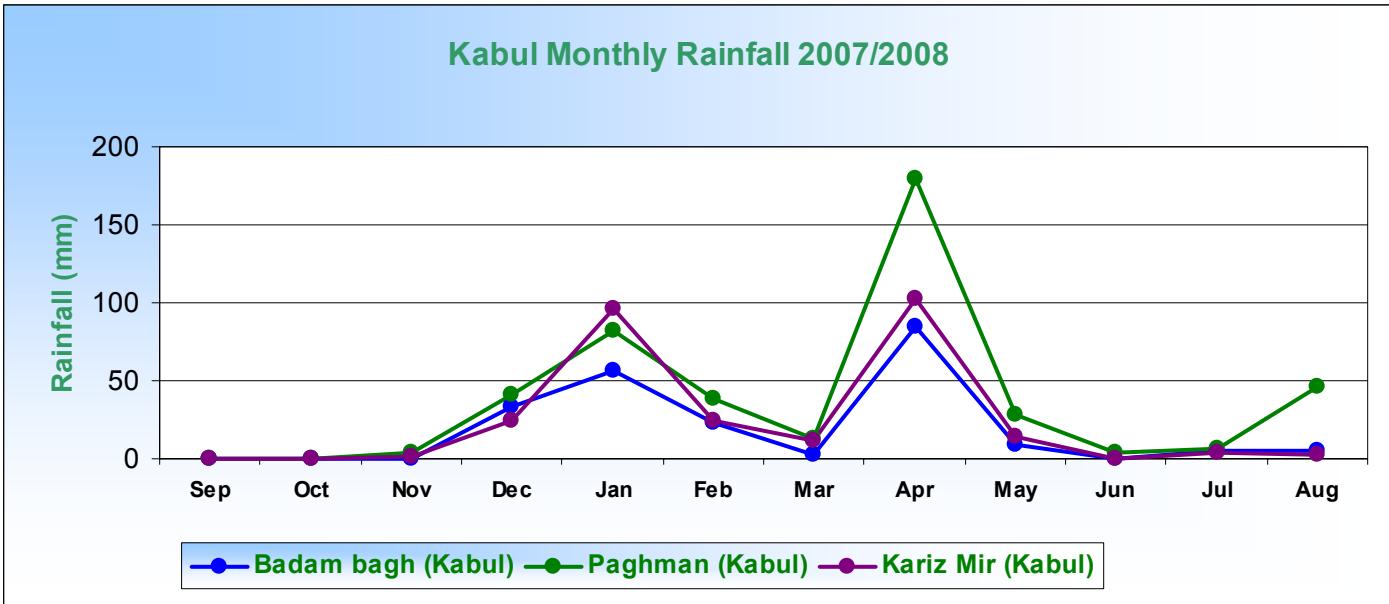




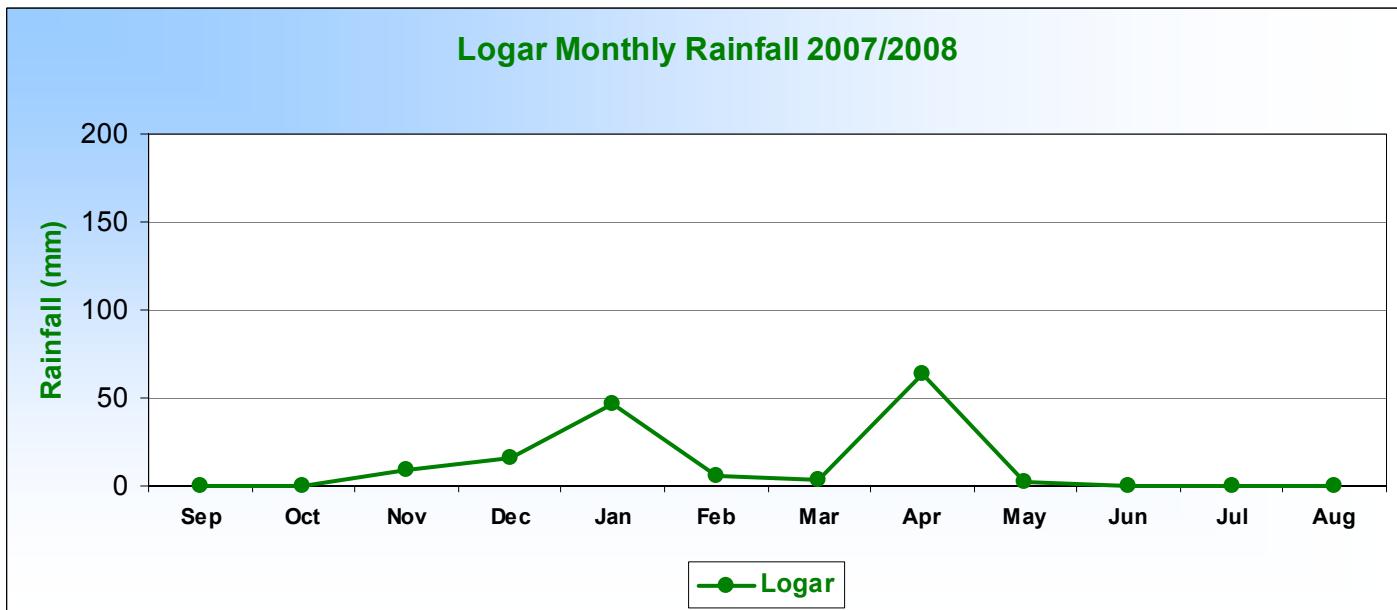
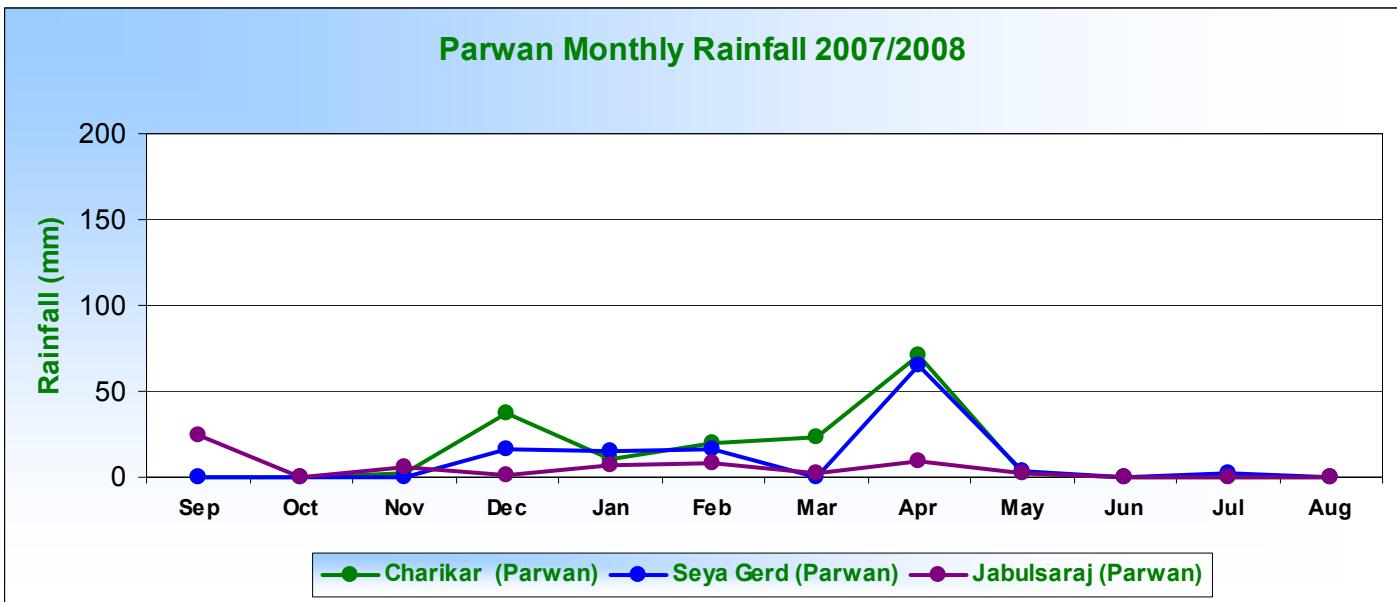
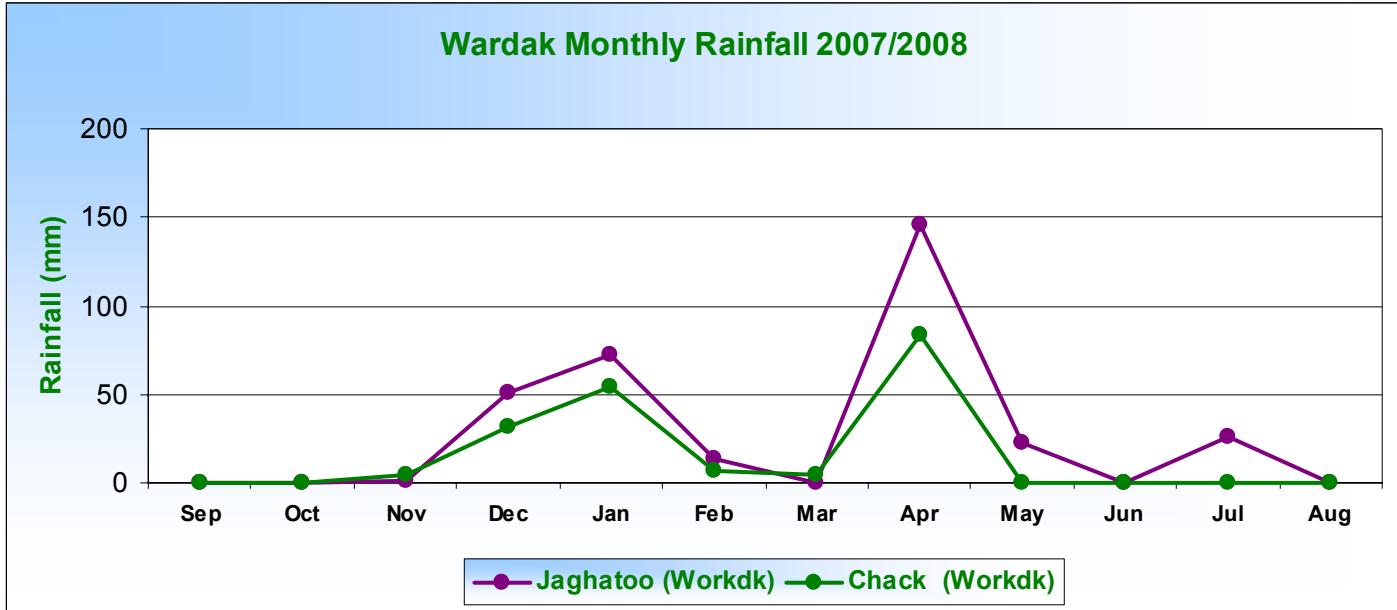
Dekadal Rainfall (mm) Graphs for
Season 2007-2008
By Region

Dekadal Rainfall Graphs by Region

Capital Region



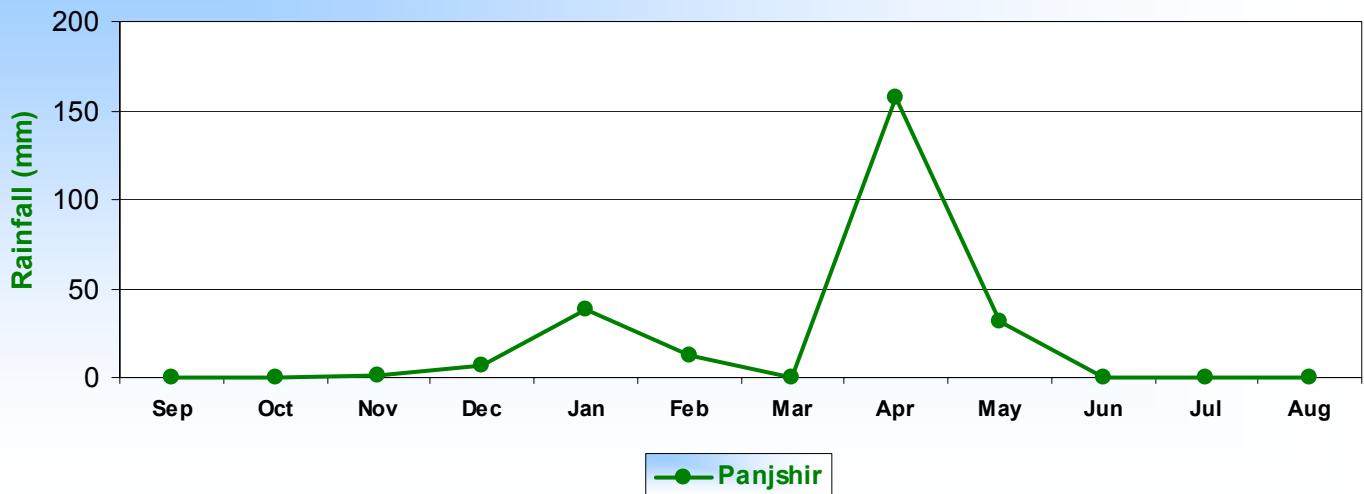
Capital Region



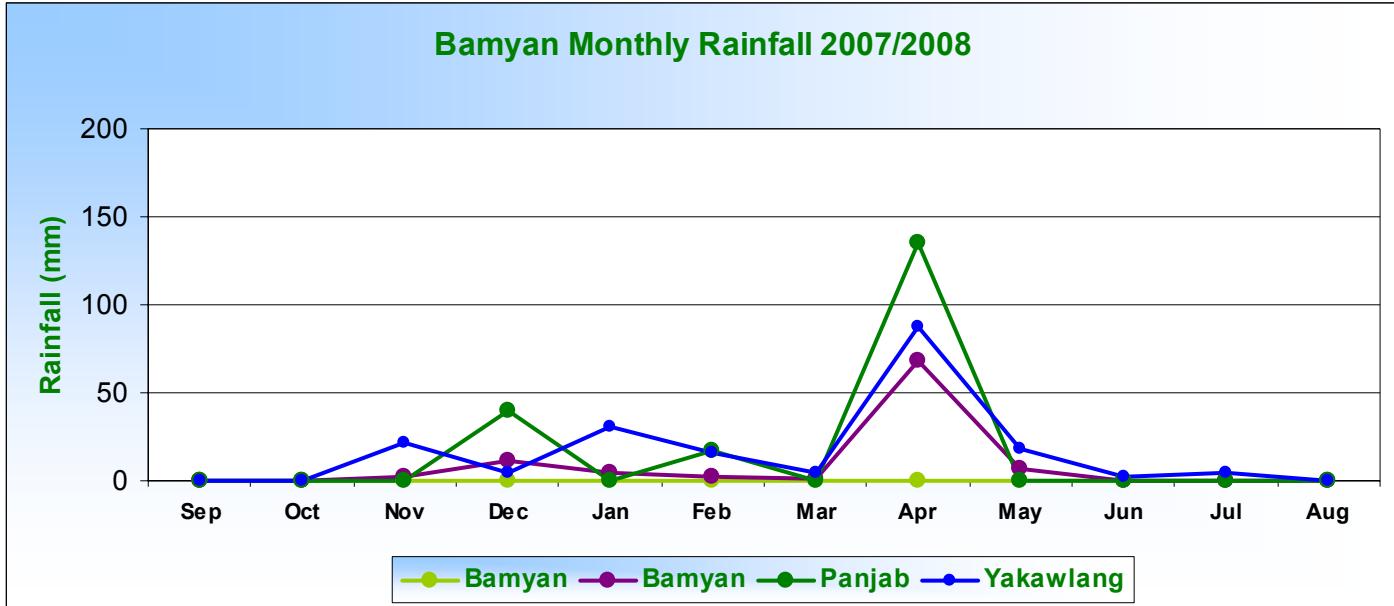
Kapisa Monthly Rainfall 2007/2008



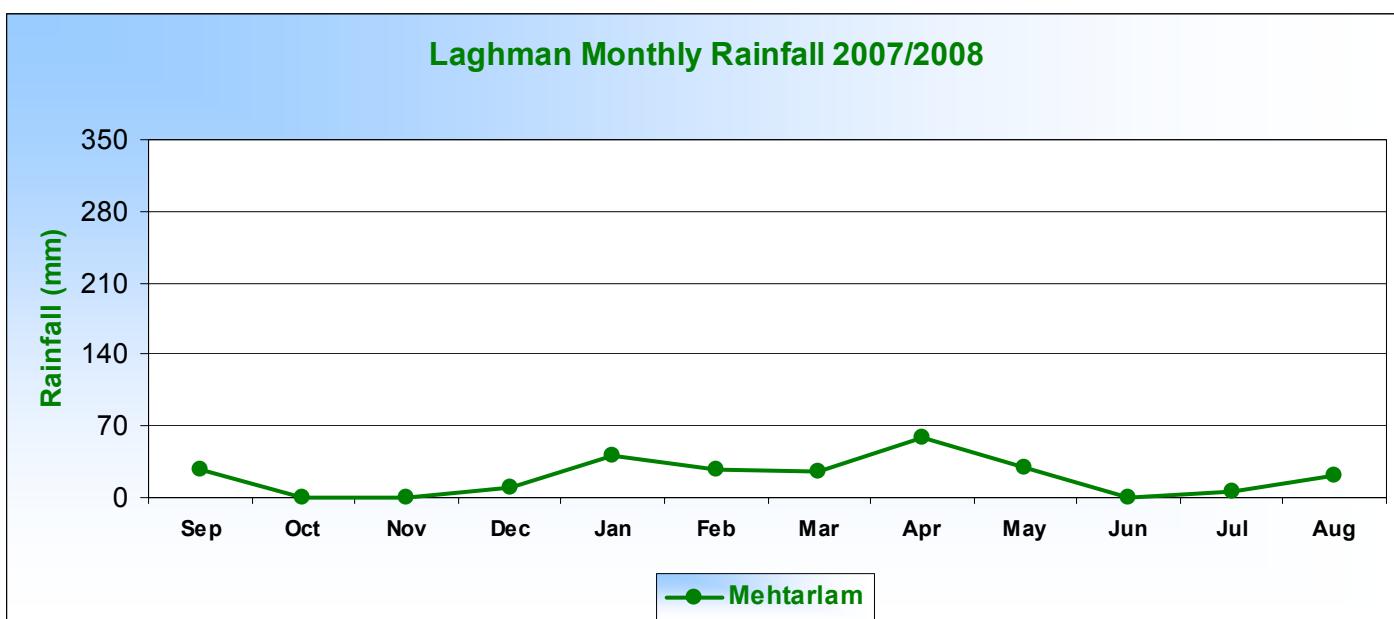
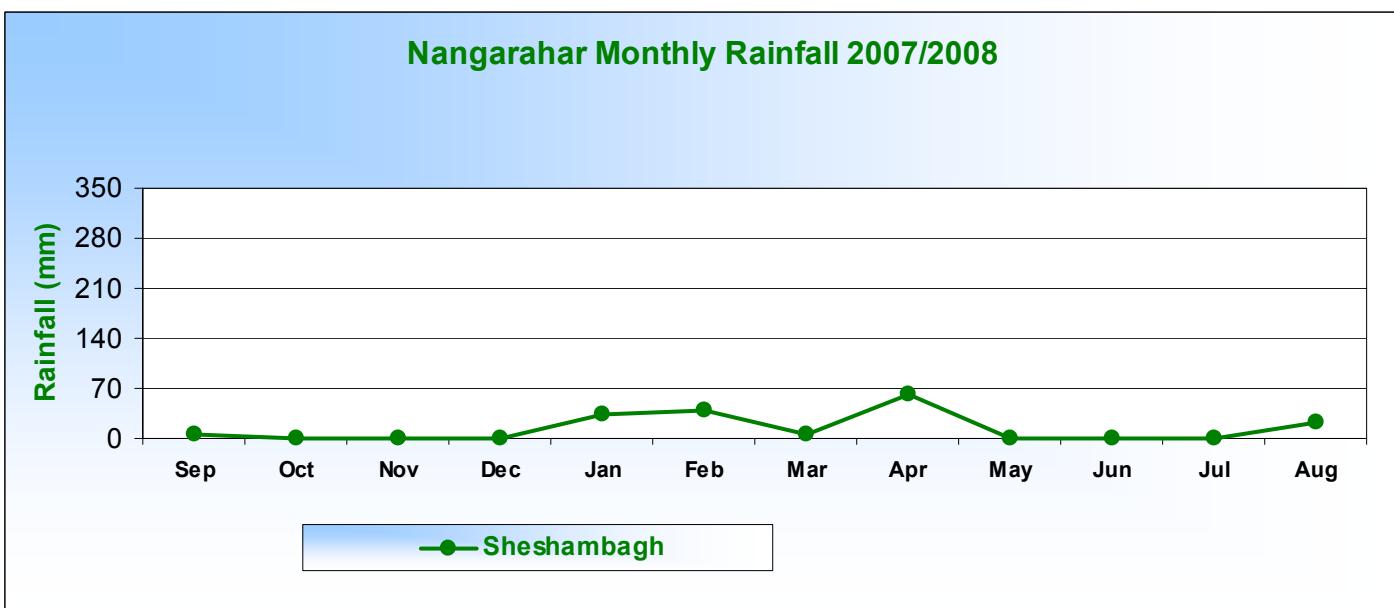
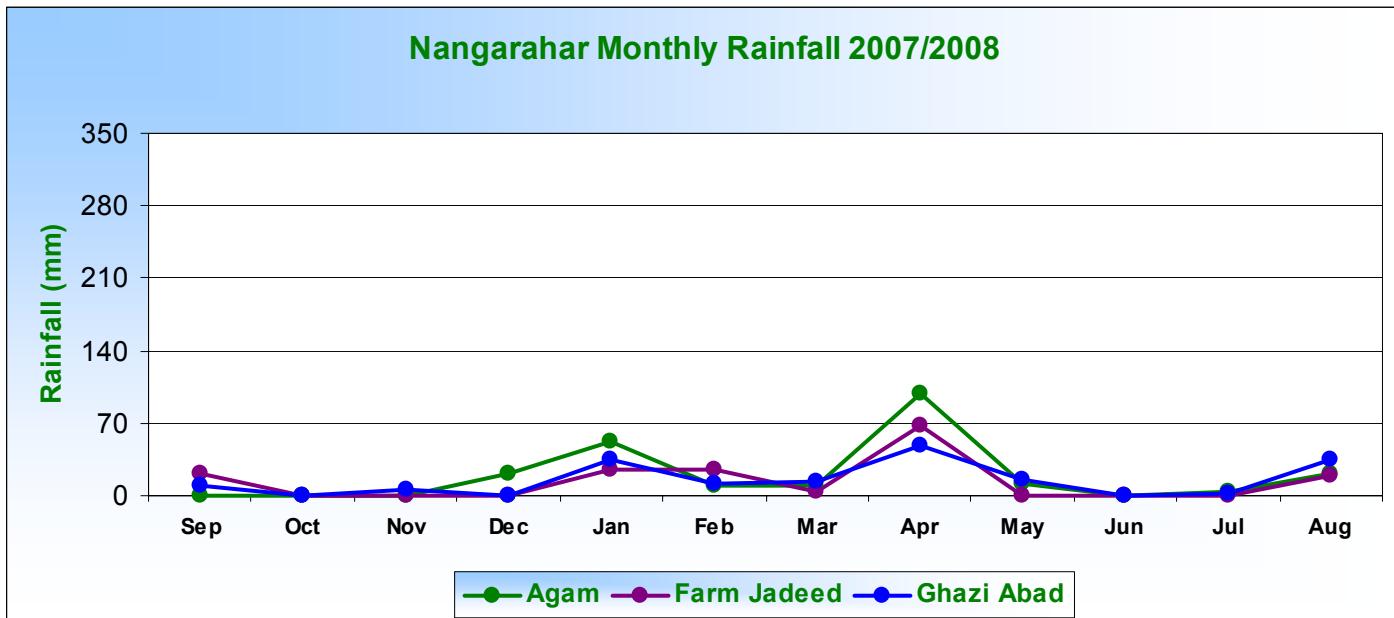
Panjshir Monthly Rainfall 2007/2008



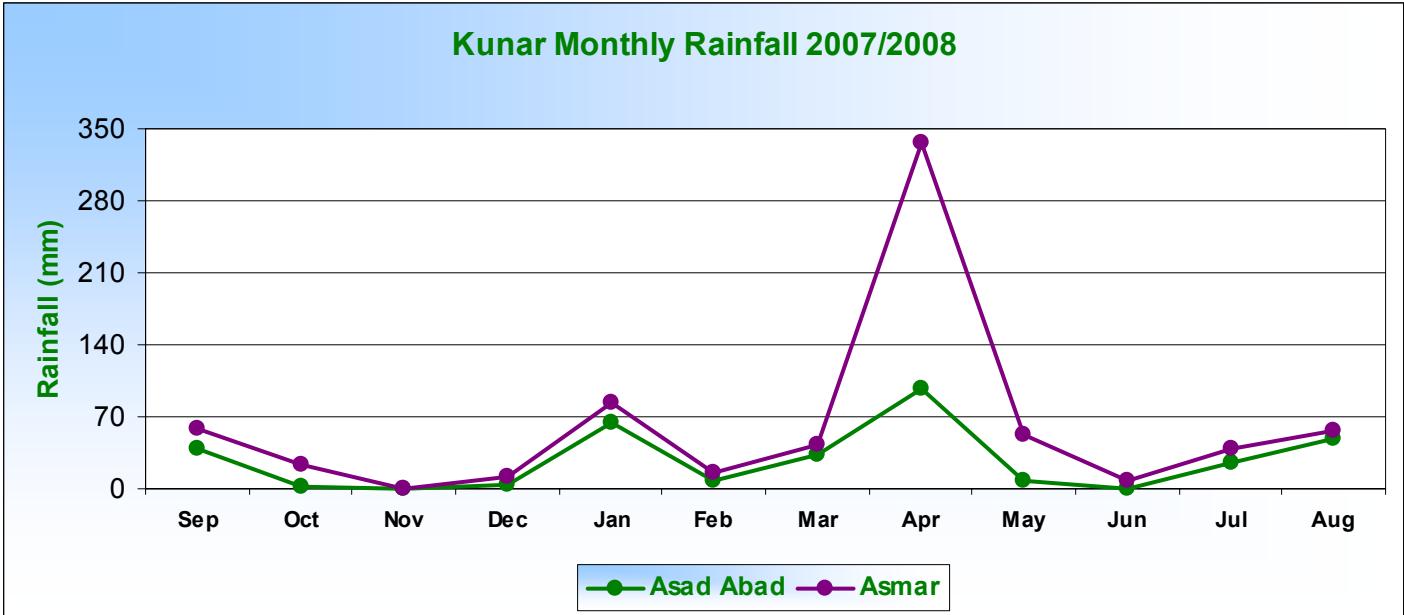
Central Highland Region



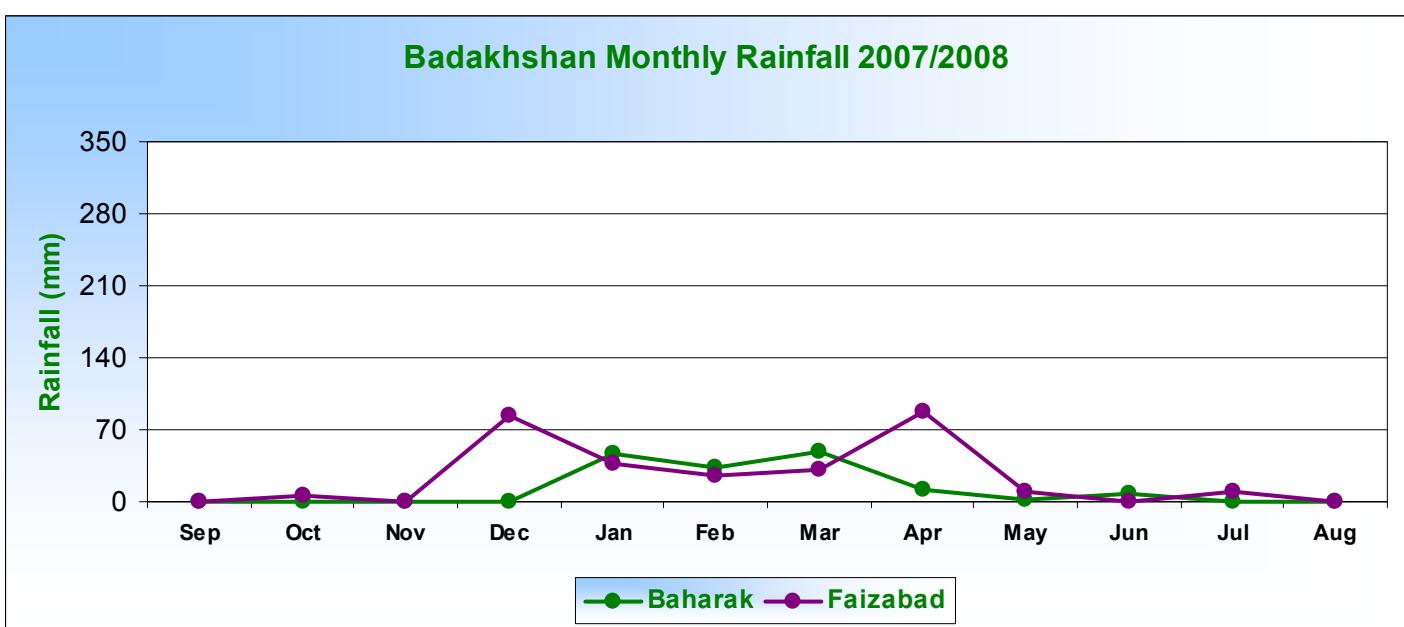
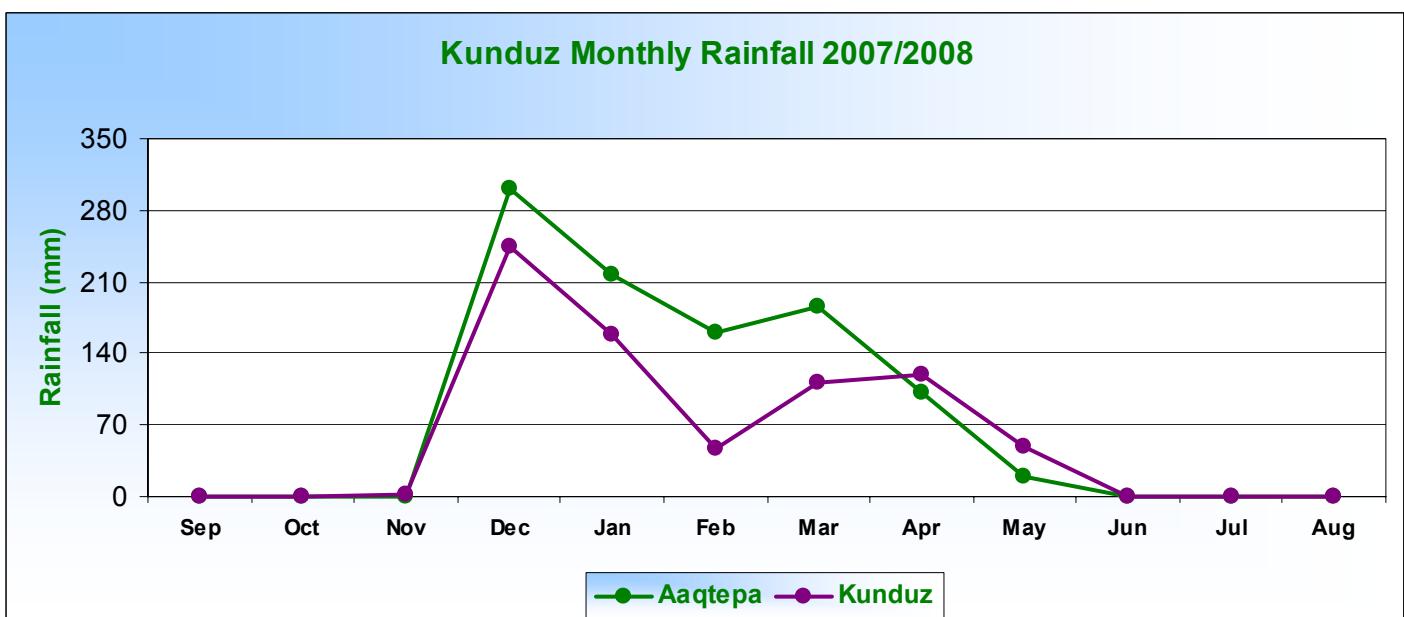
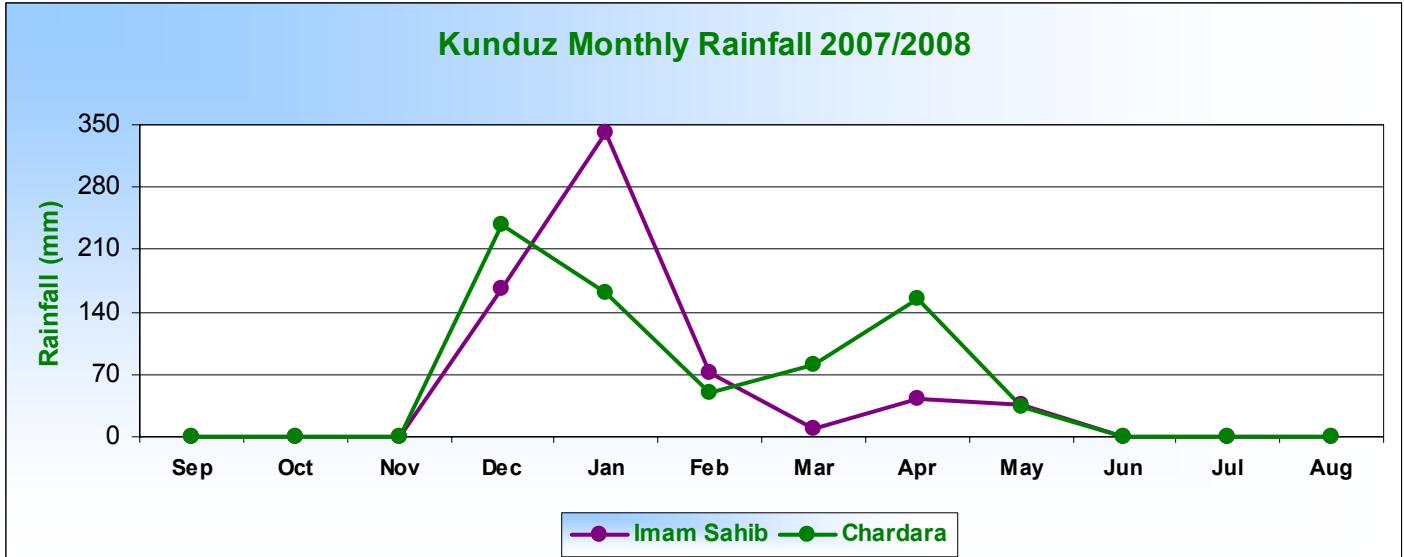
Eastern Region

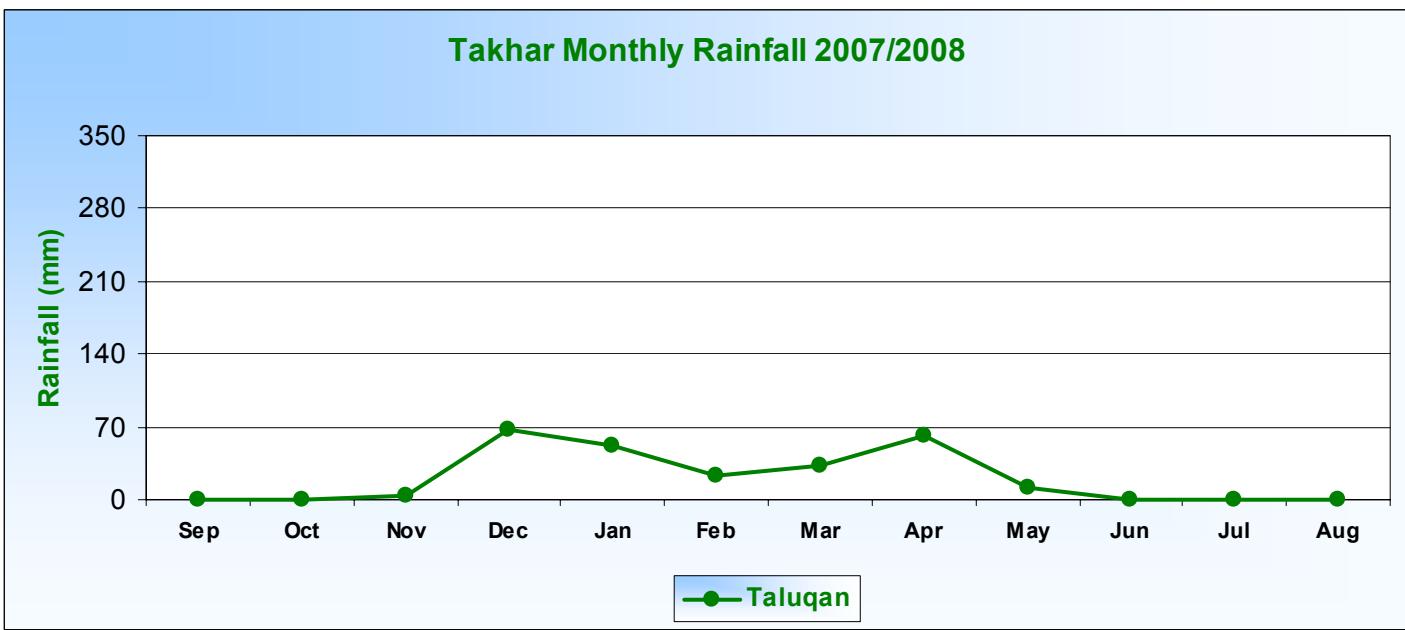
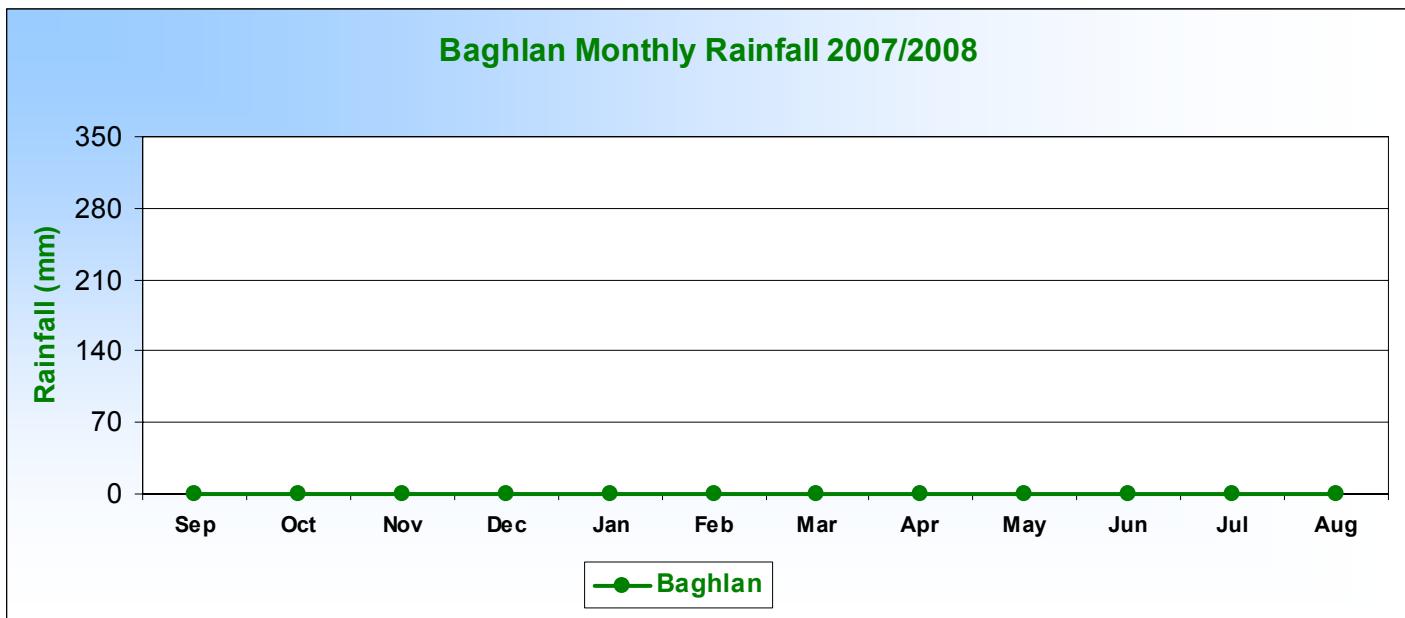


Eastern Region

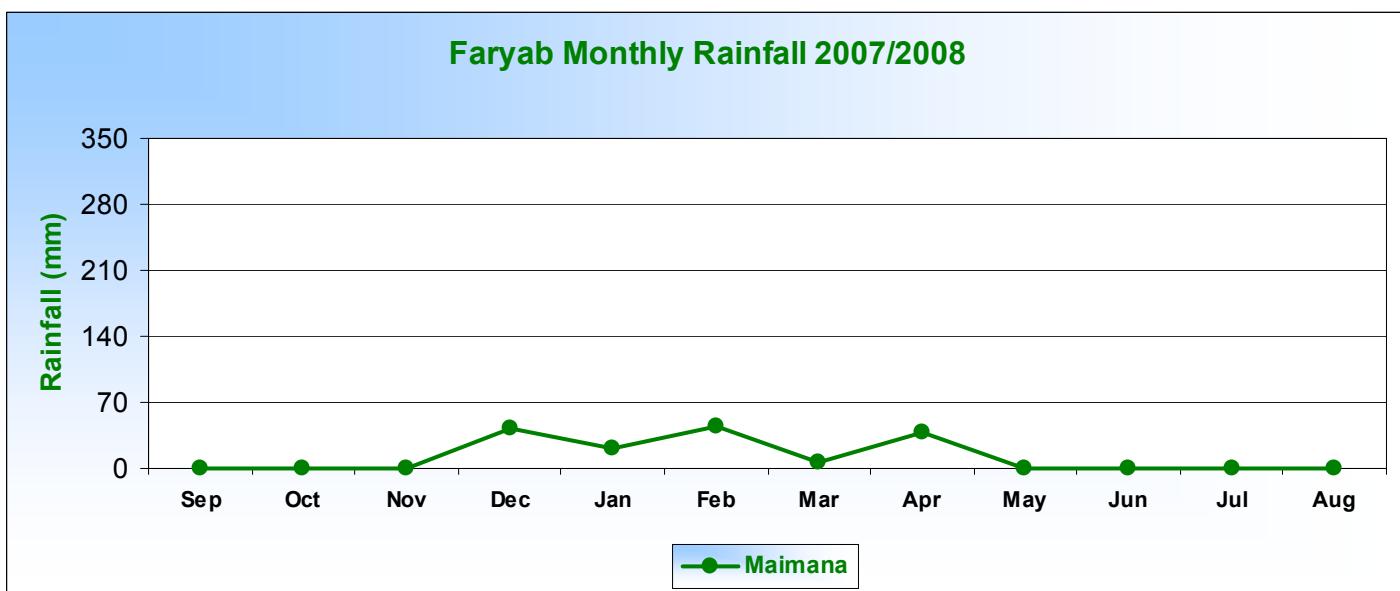
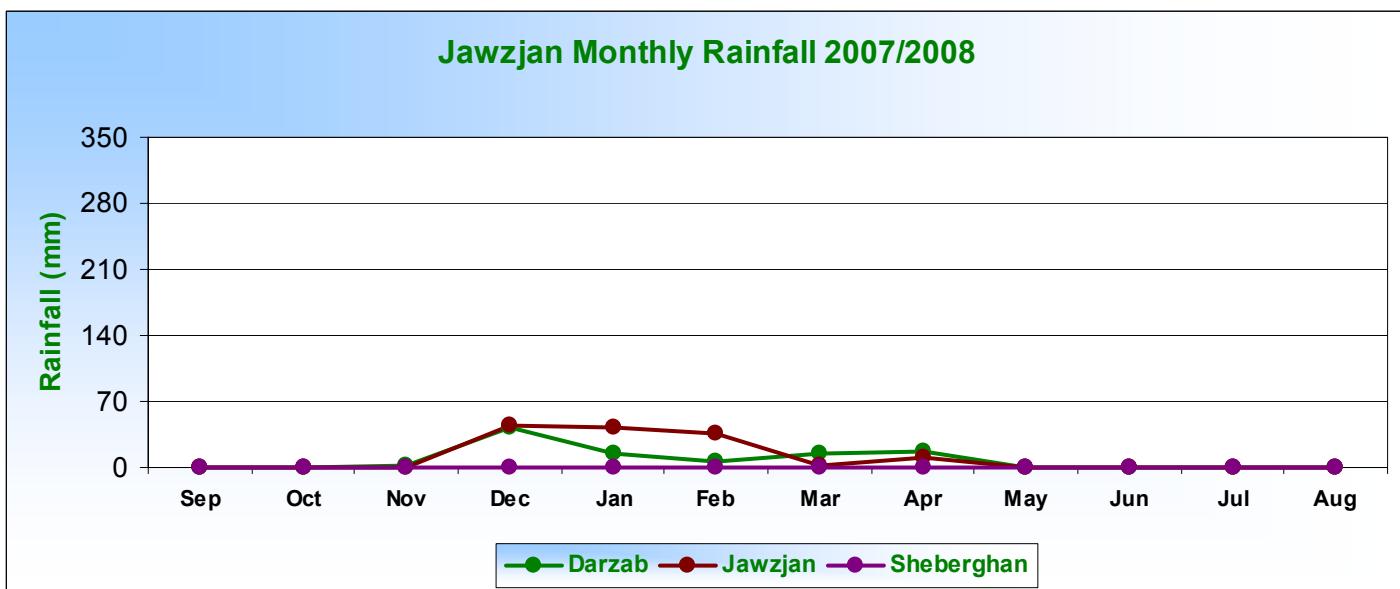
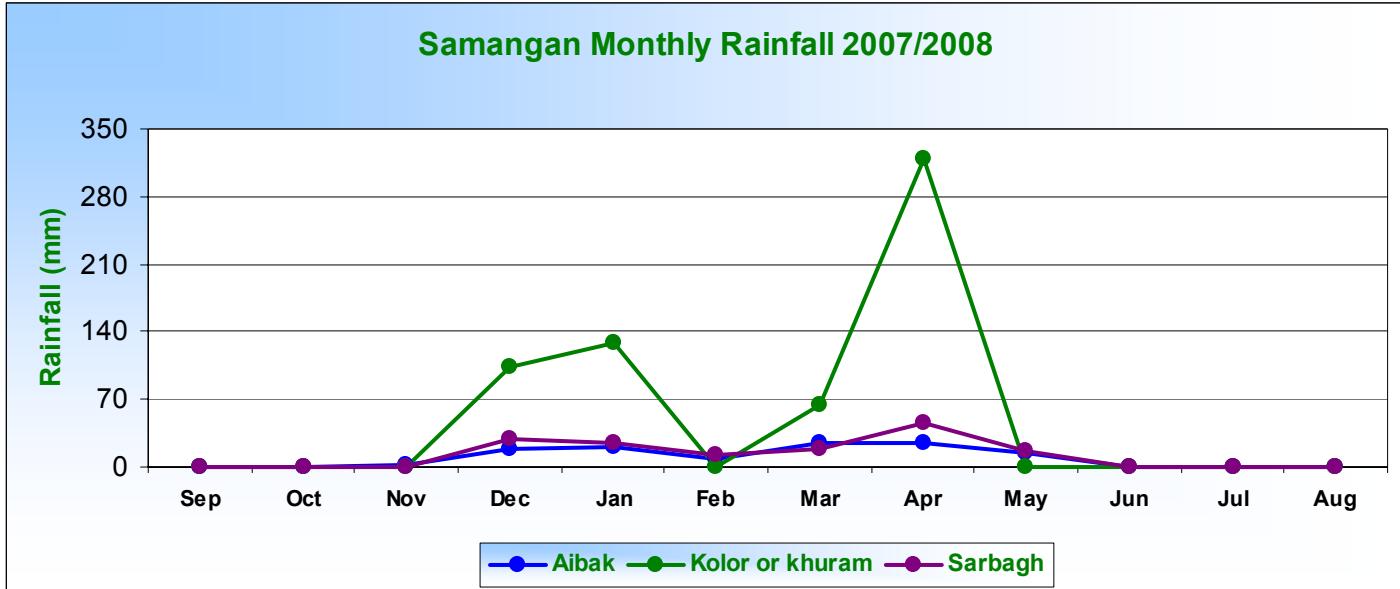


North East Region

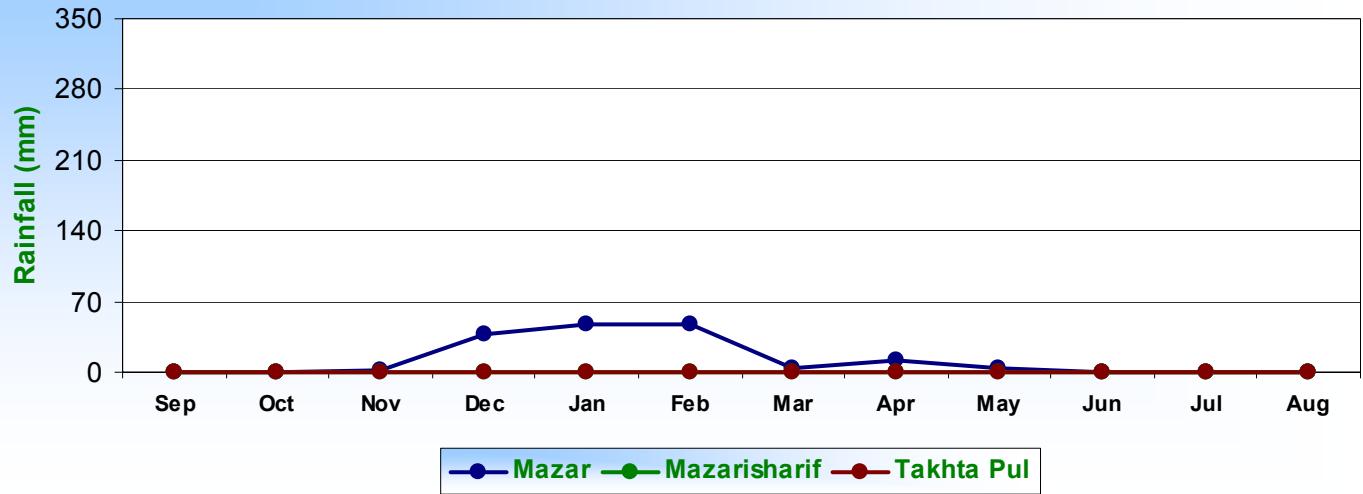




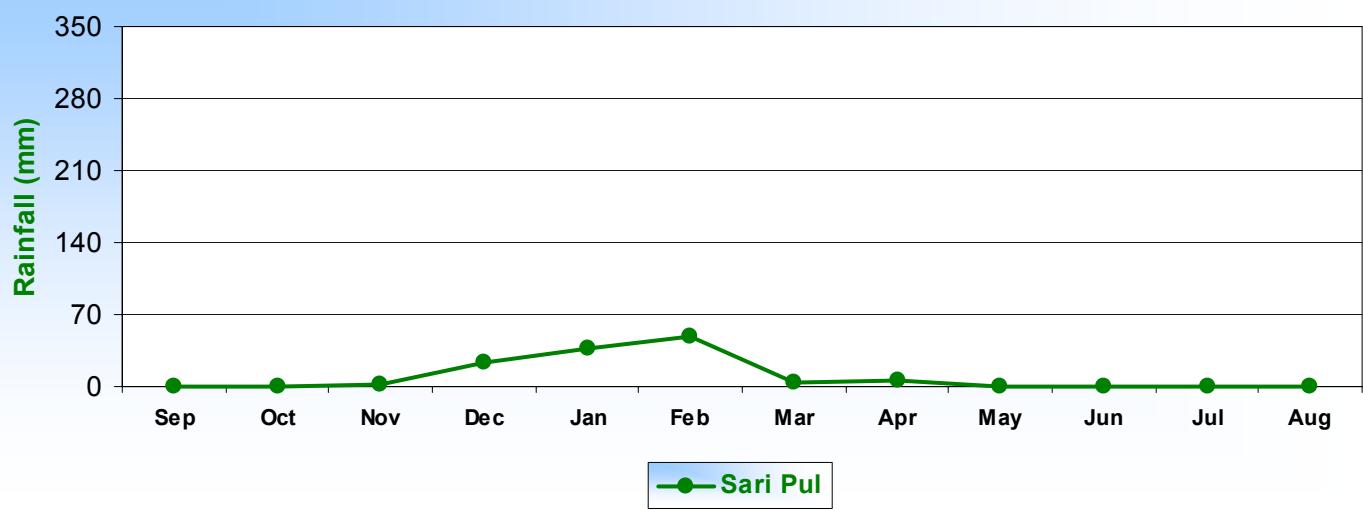
Northern Region



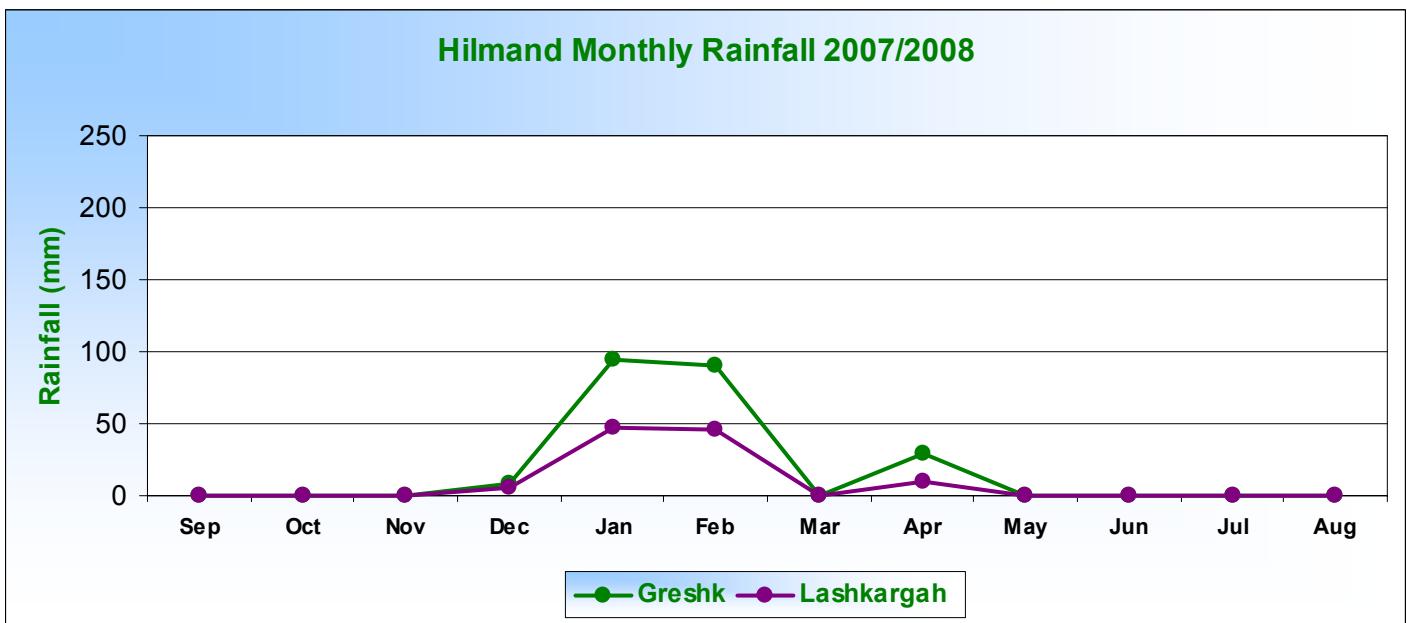
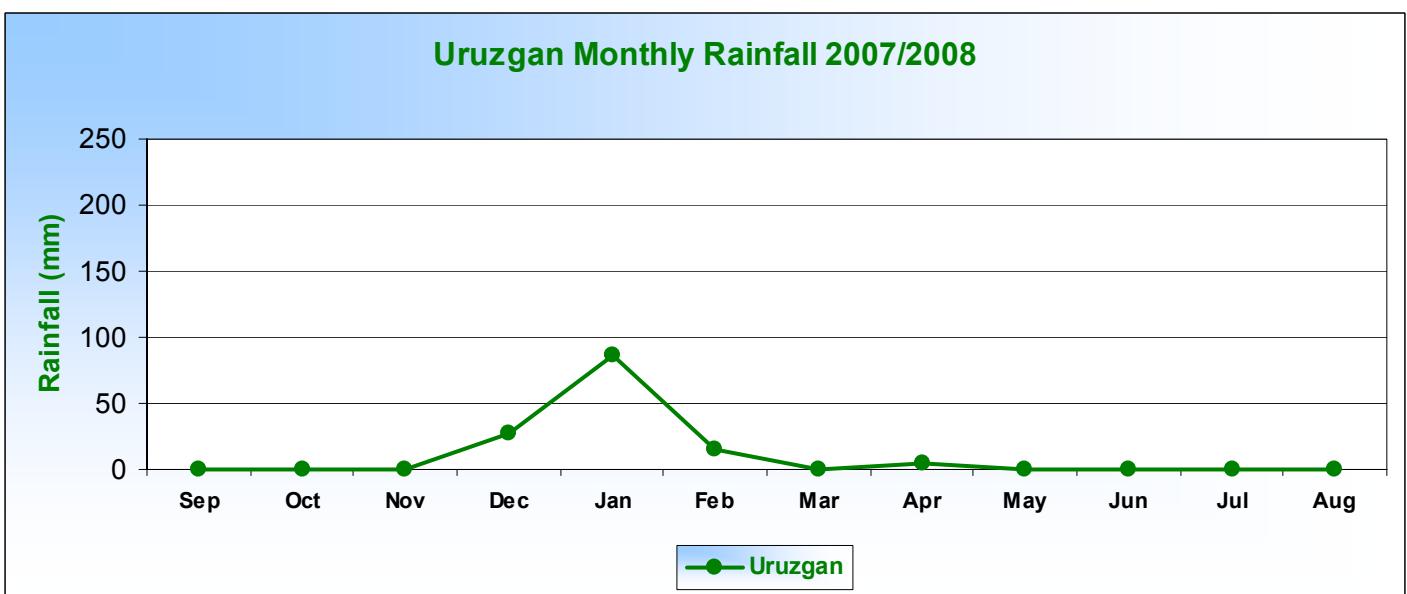
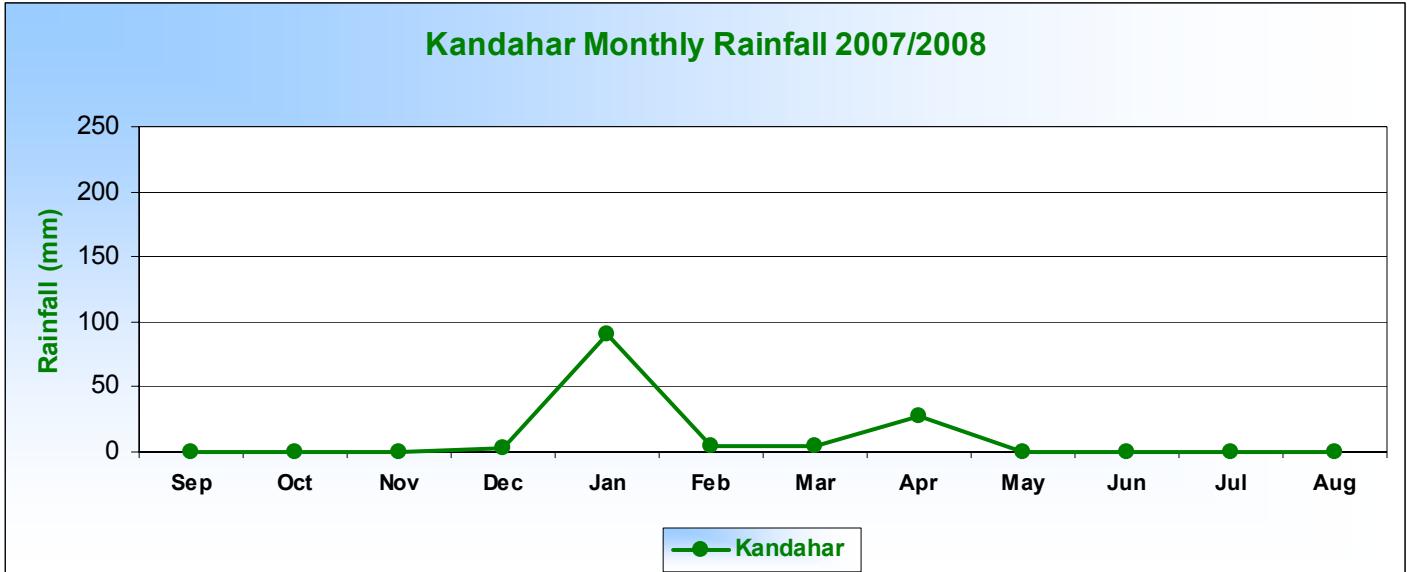
Balkh Monthly Rainfall 2007/2008



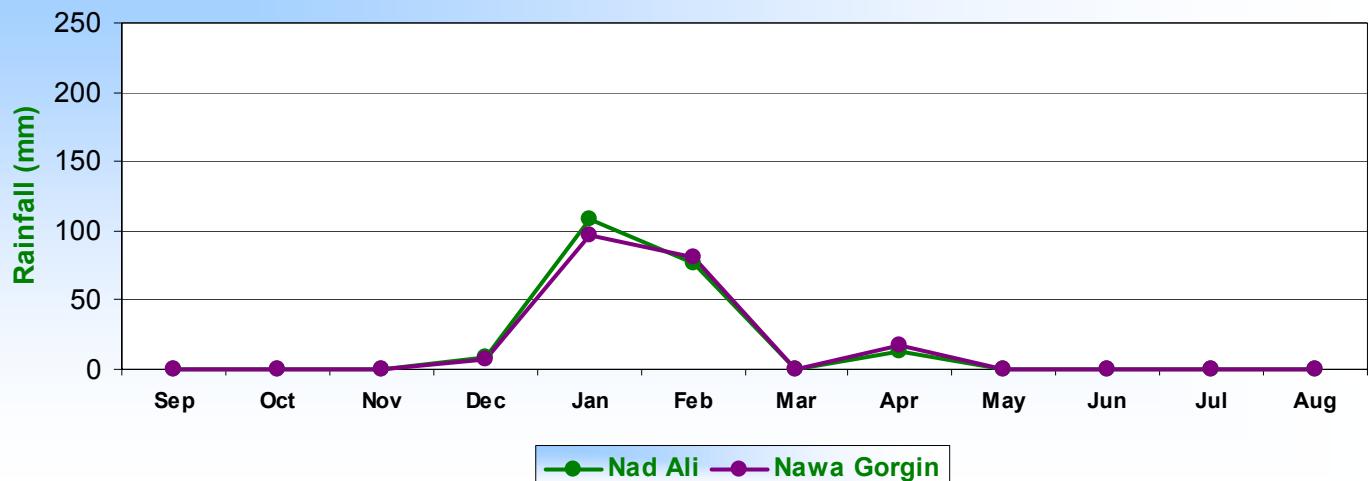
Sari Pul Monthly Rainfall 2007/2008



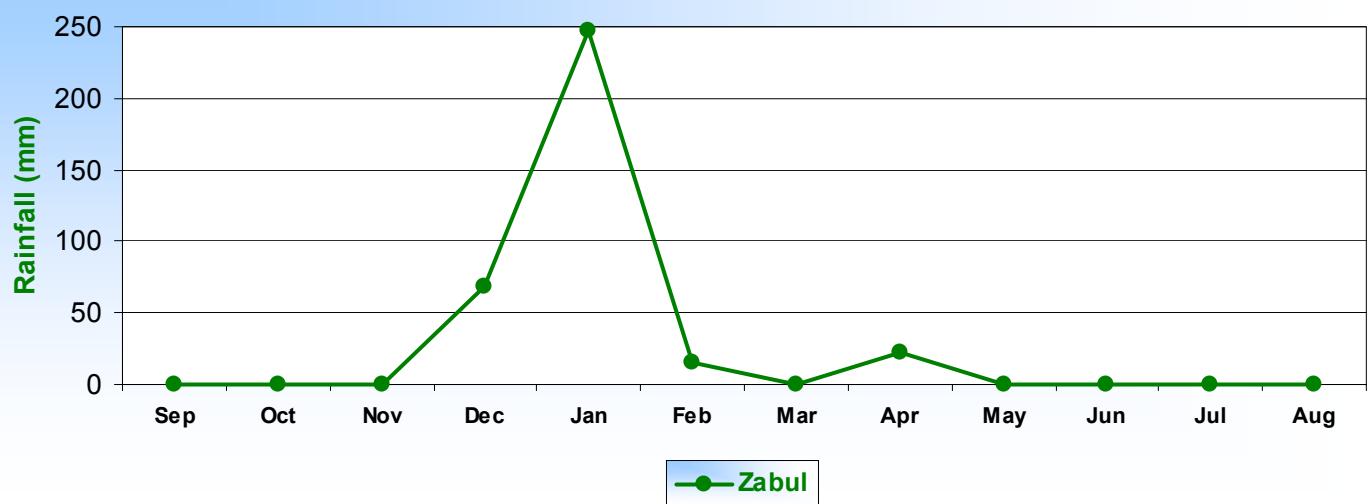
Southern Region



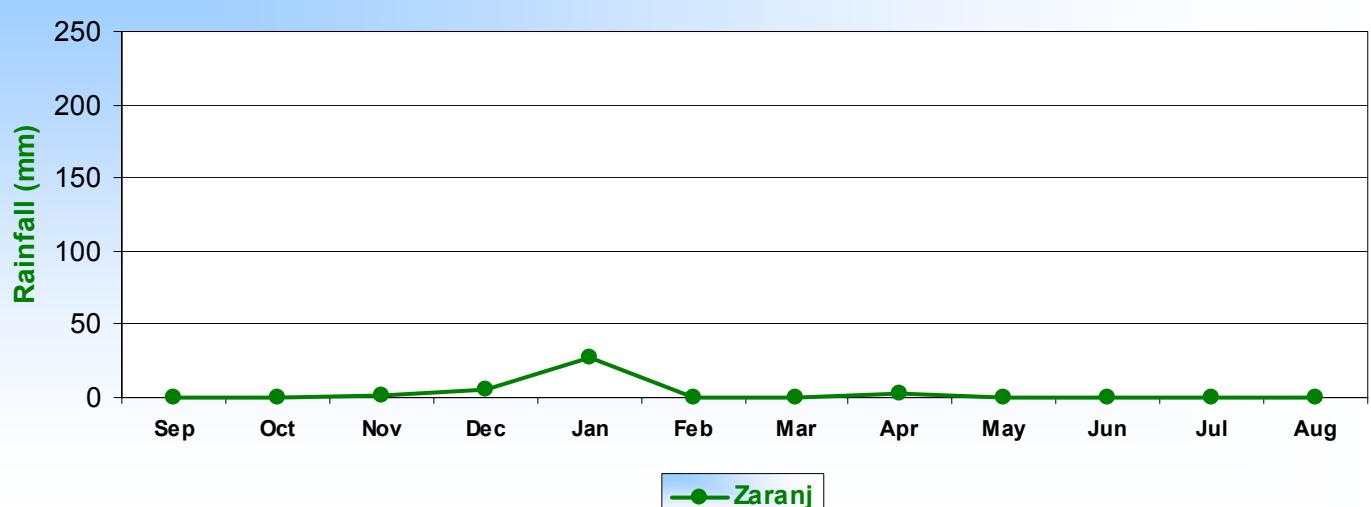
Hilmand Monthly Rainfall 2007/2008



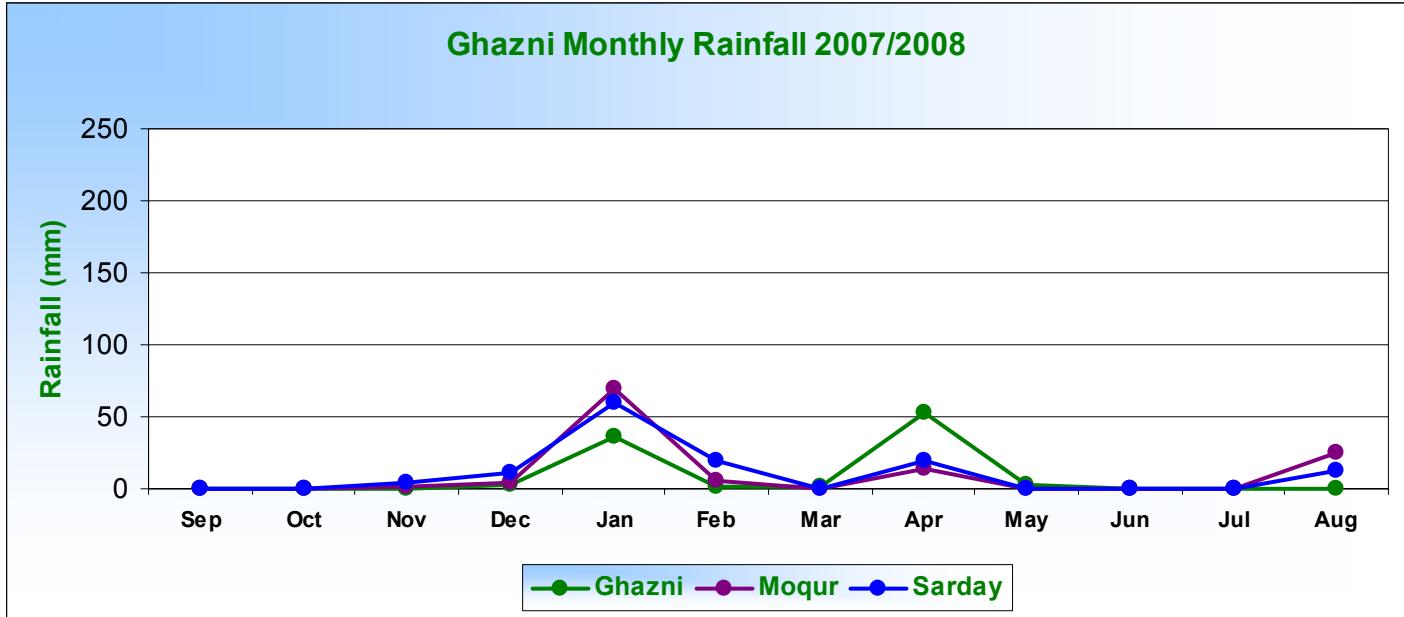
Zabul Monthly Rainfall 2007/2008



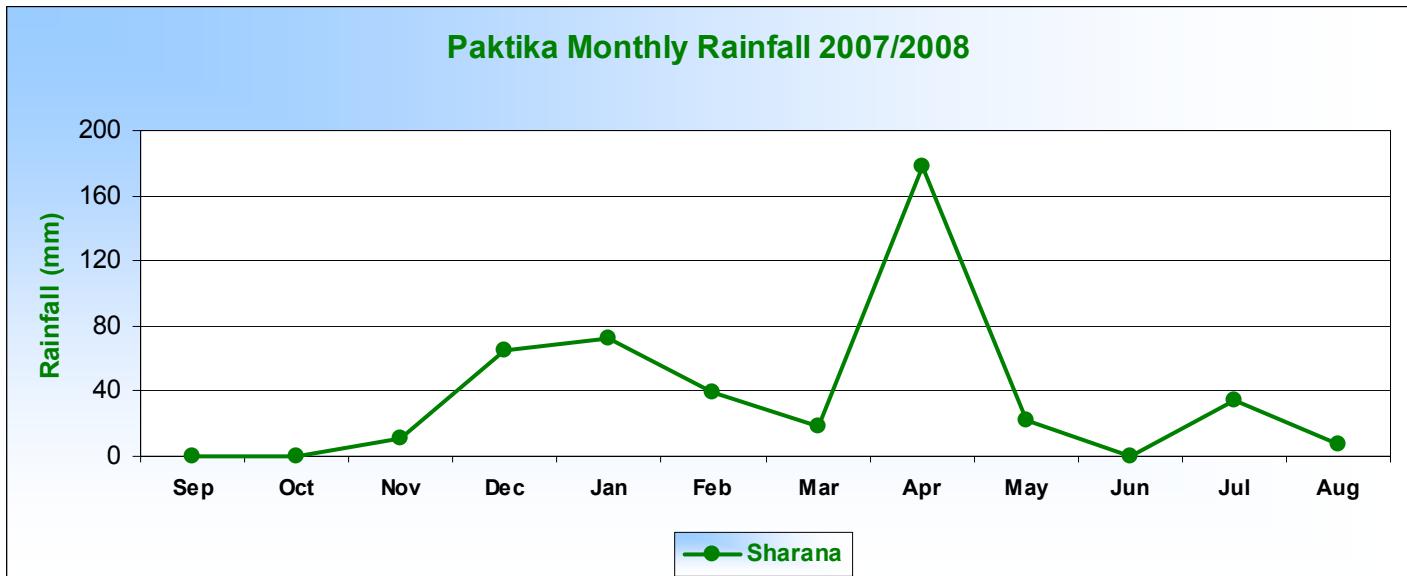
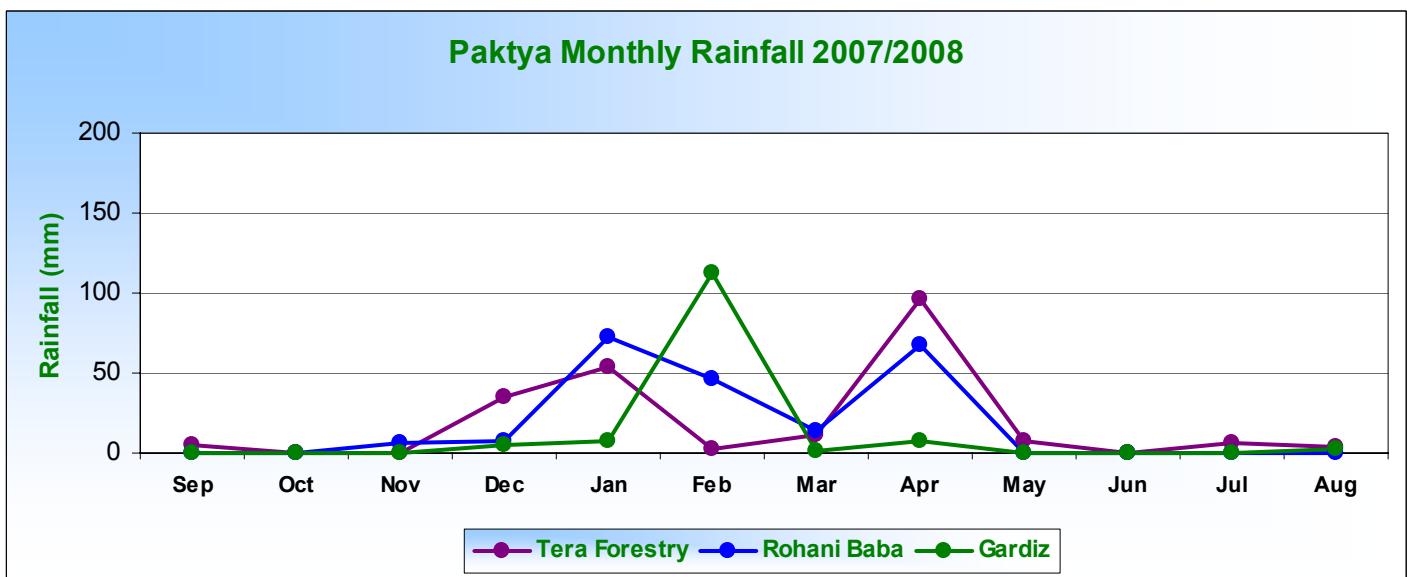
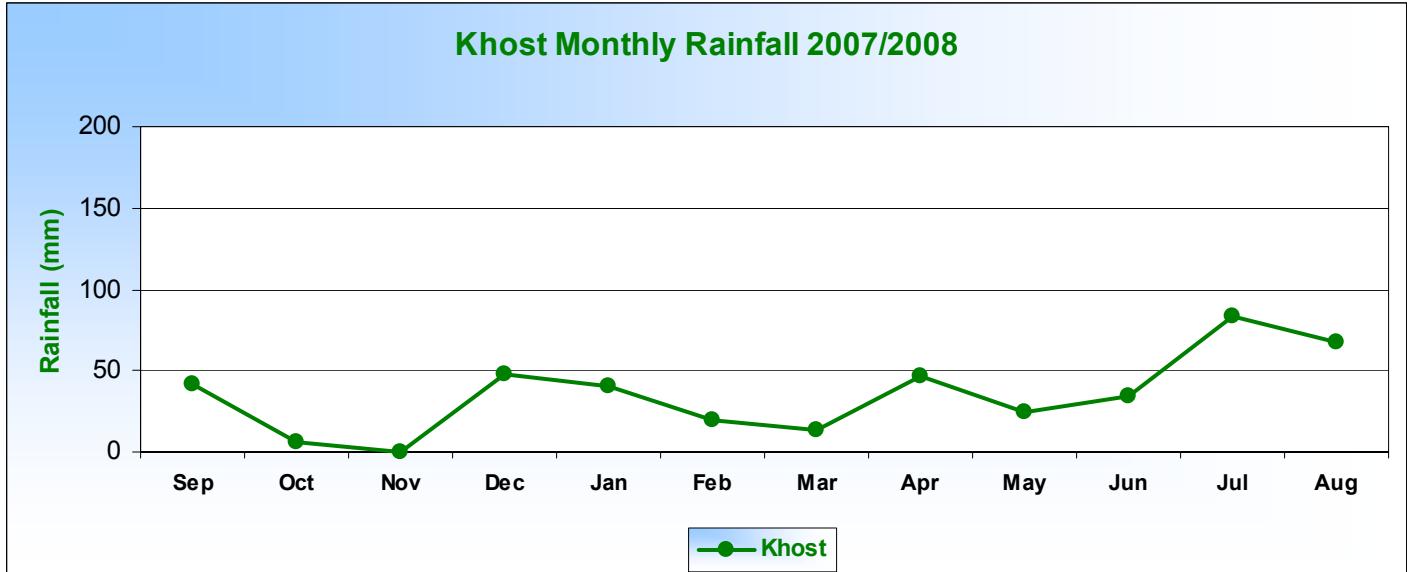
Nimroz Monthly Rainfall 2007/2008



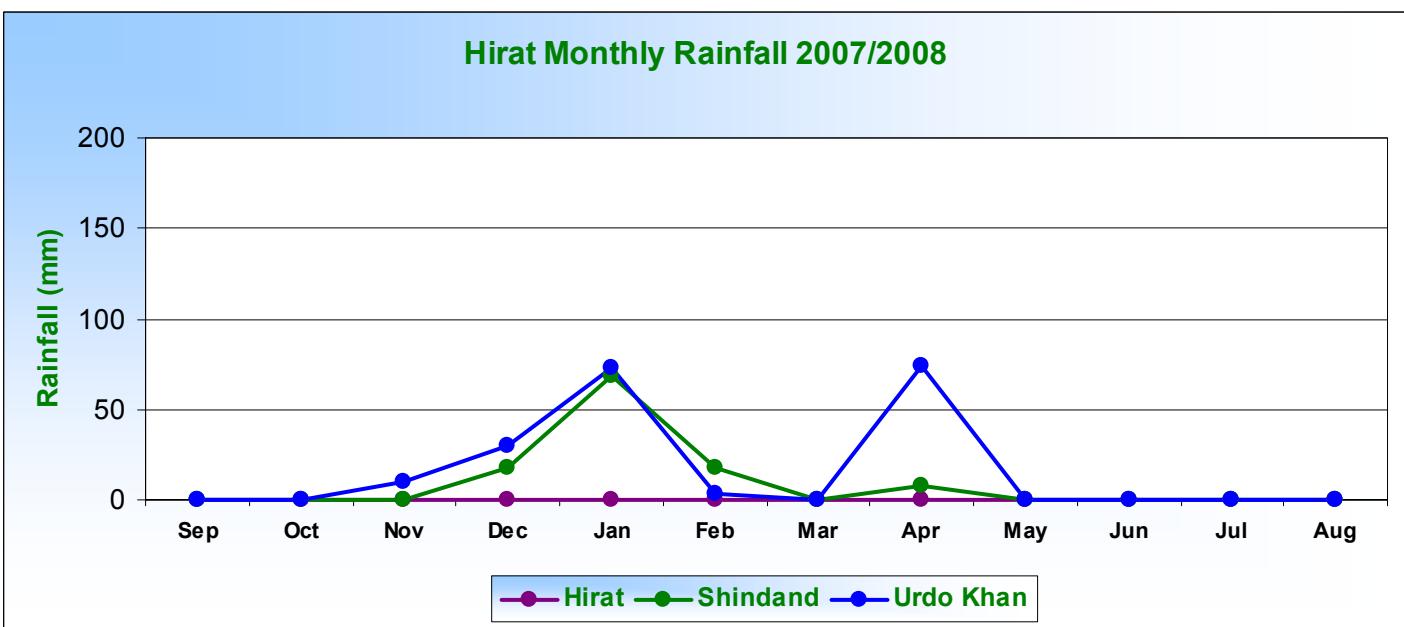
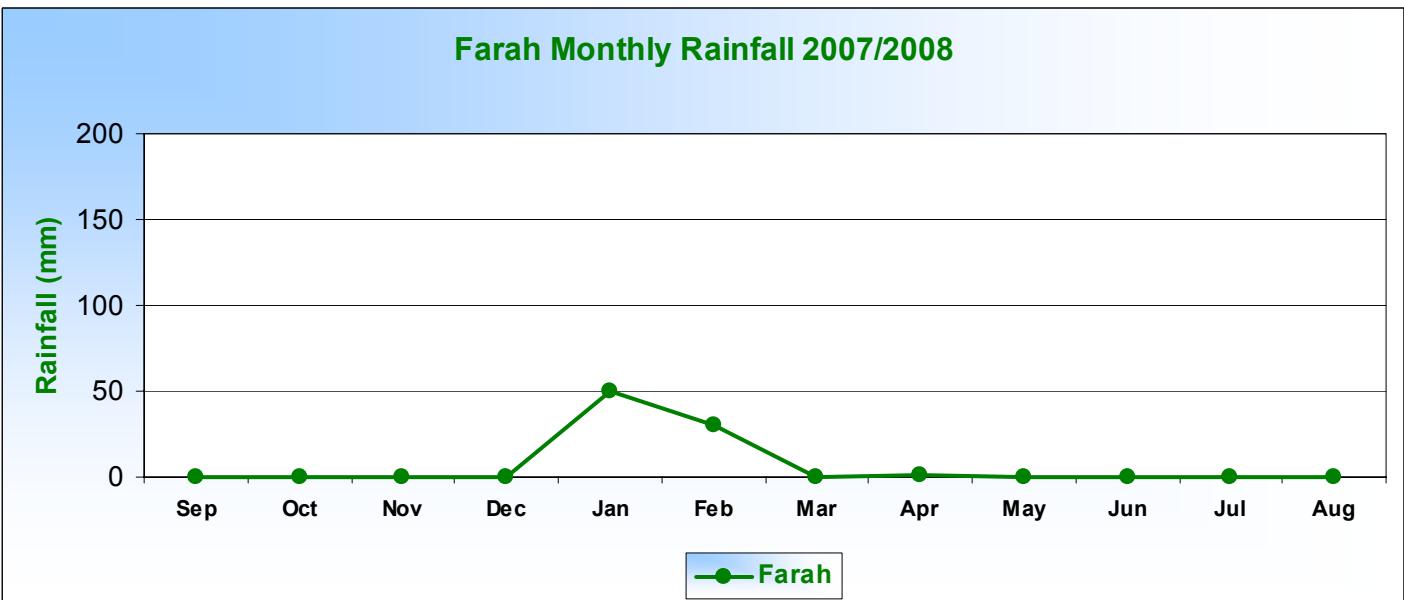
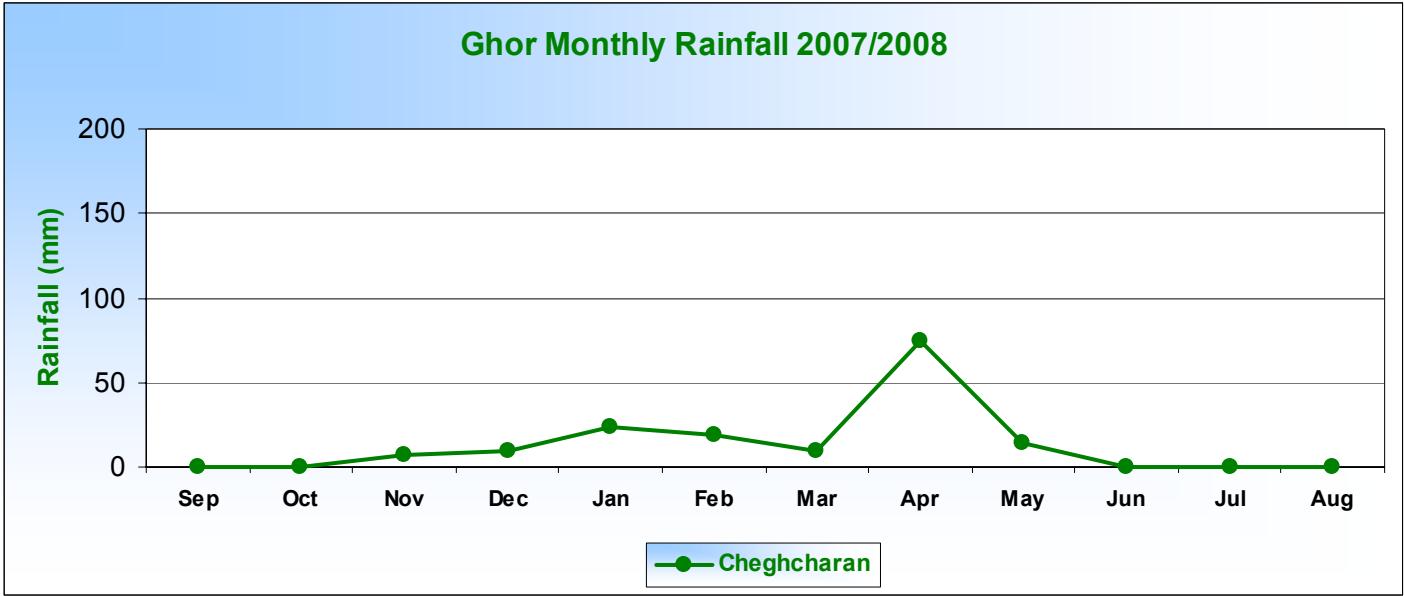
Southern Region



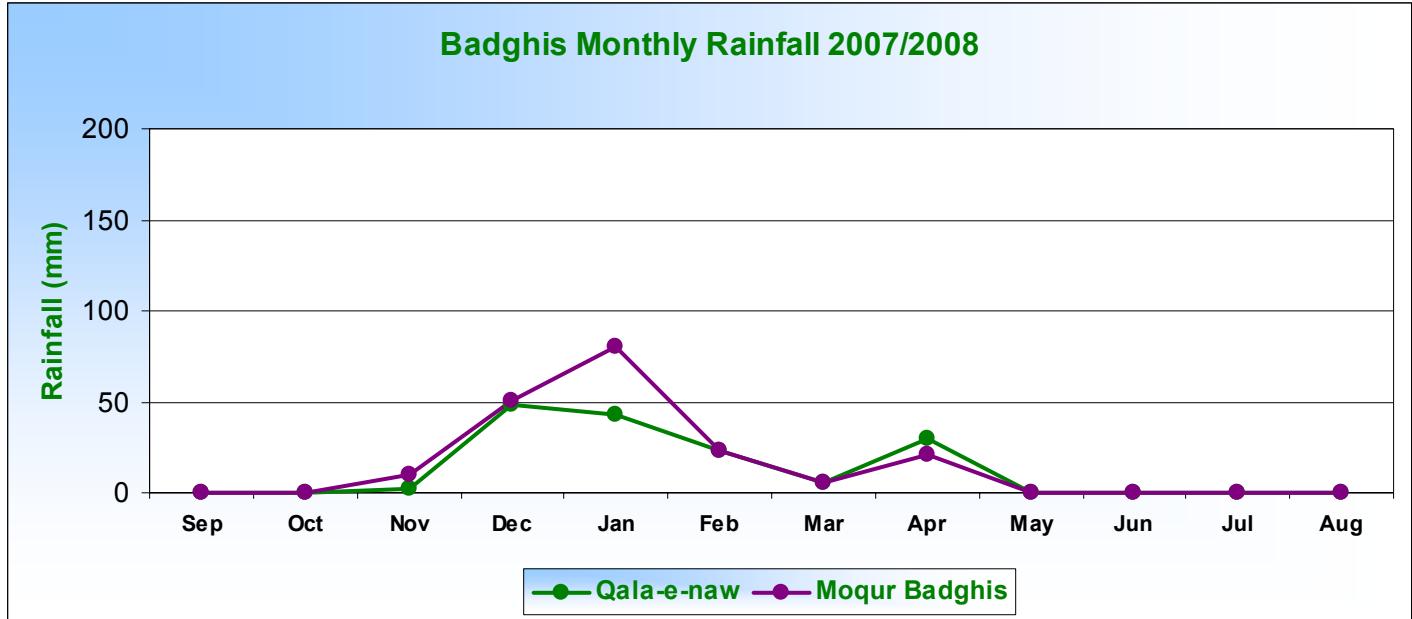
South East Region



Western Region

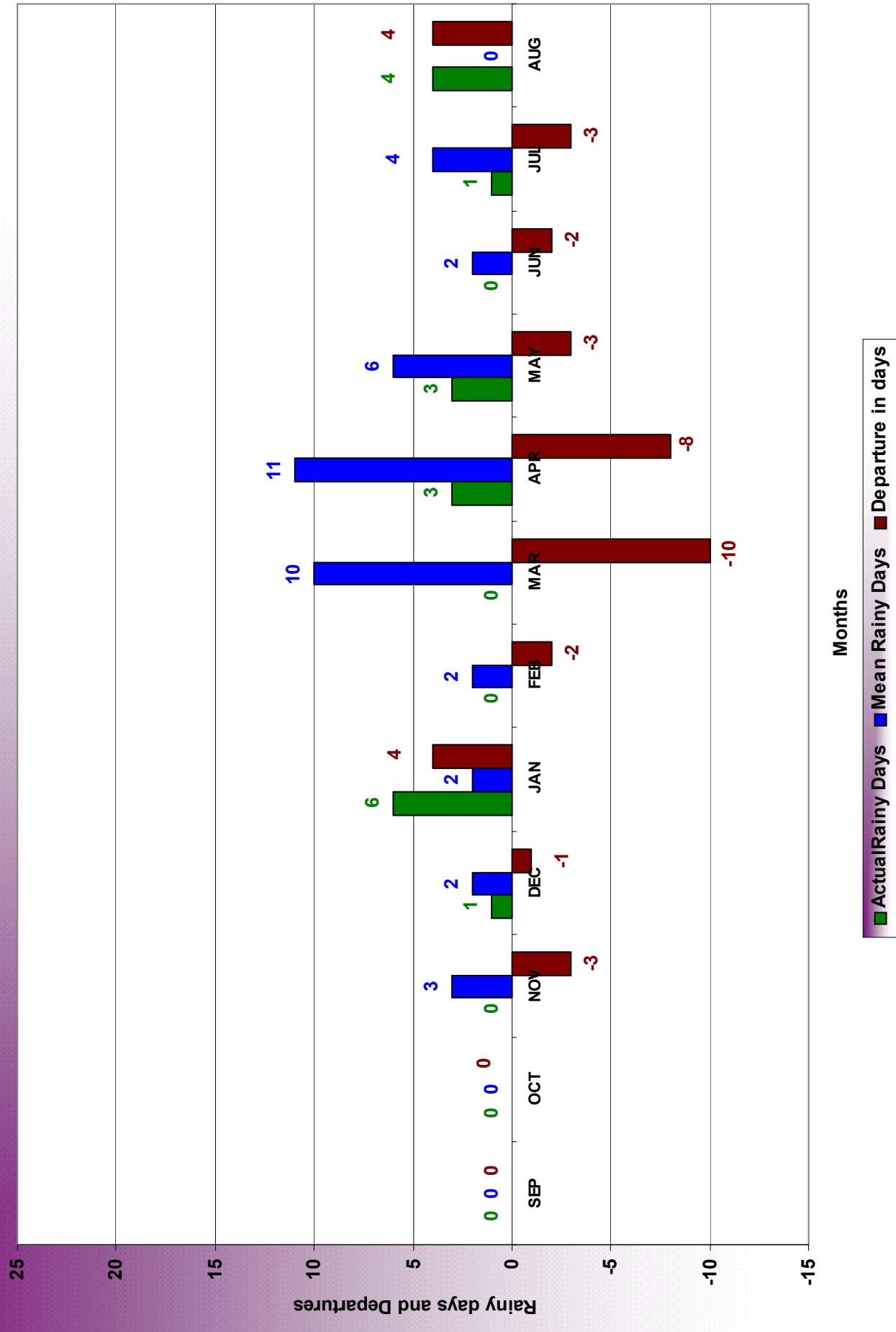


Western Region

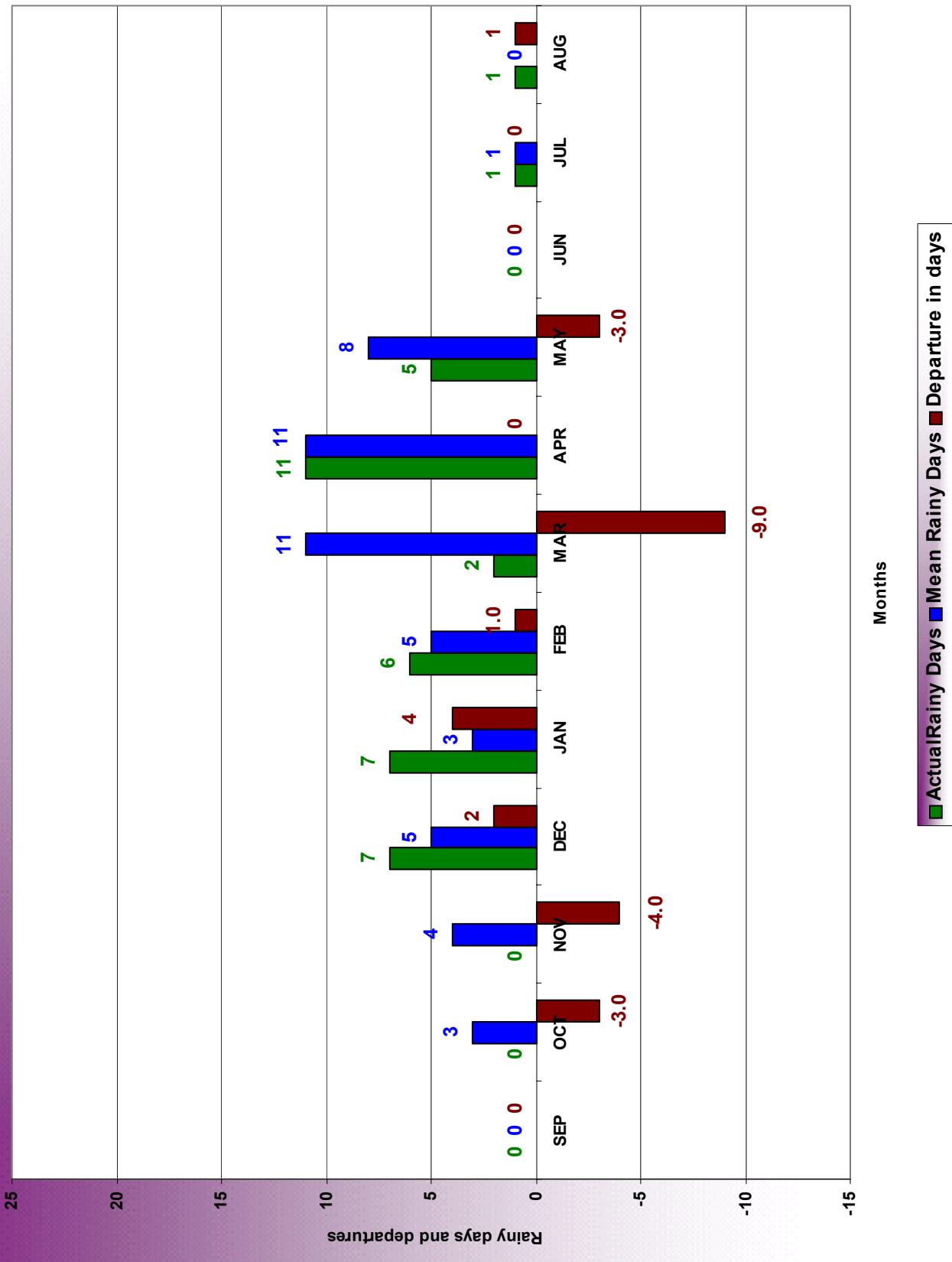


Rainy Days
Compared with
Long Term Average and Departure
Season 2007- 2008

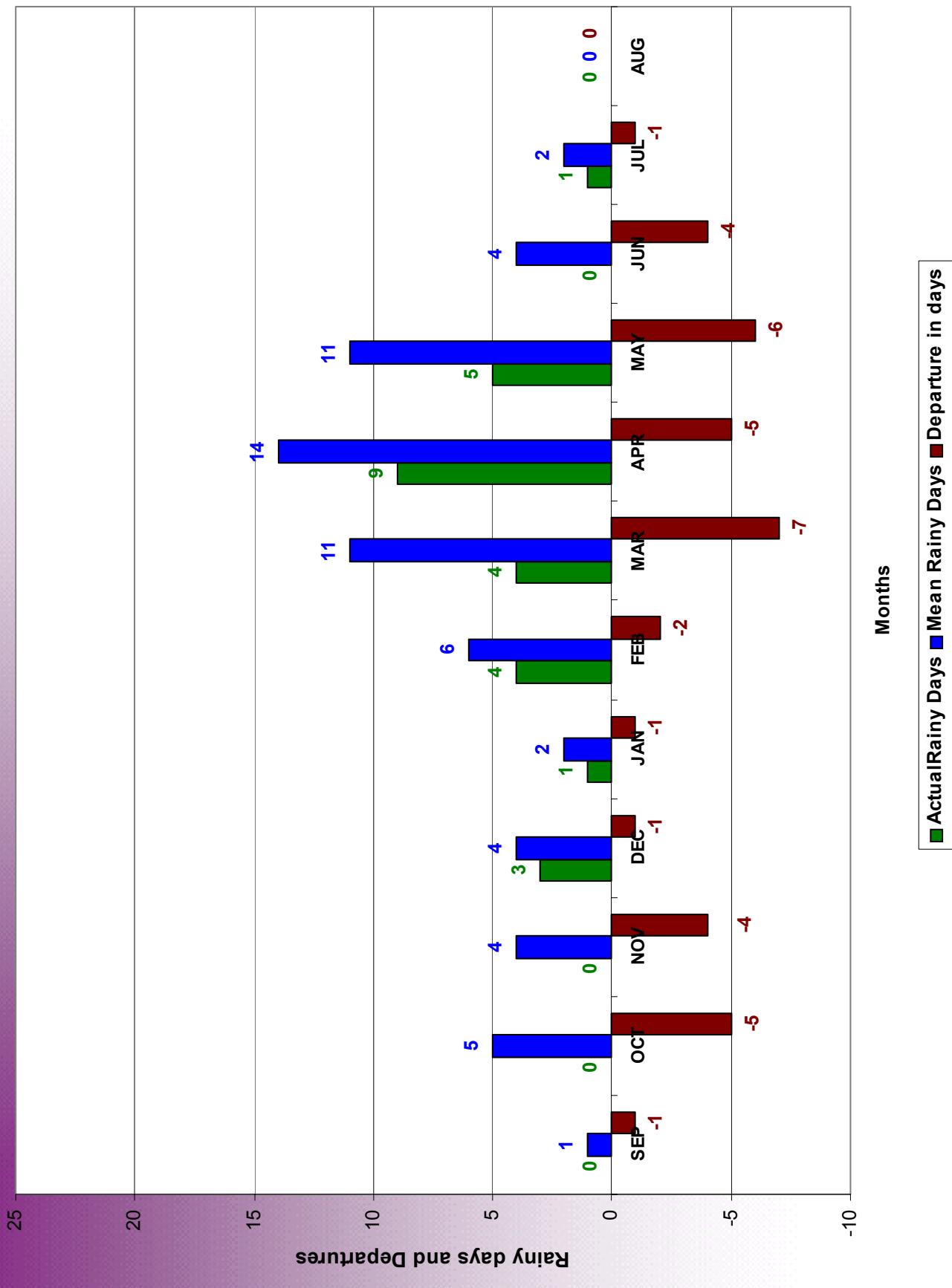
Ghazni Rainy Days Season 2007 - 2008 Compared to the Long-Term Average and Departures



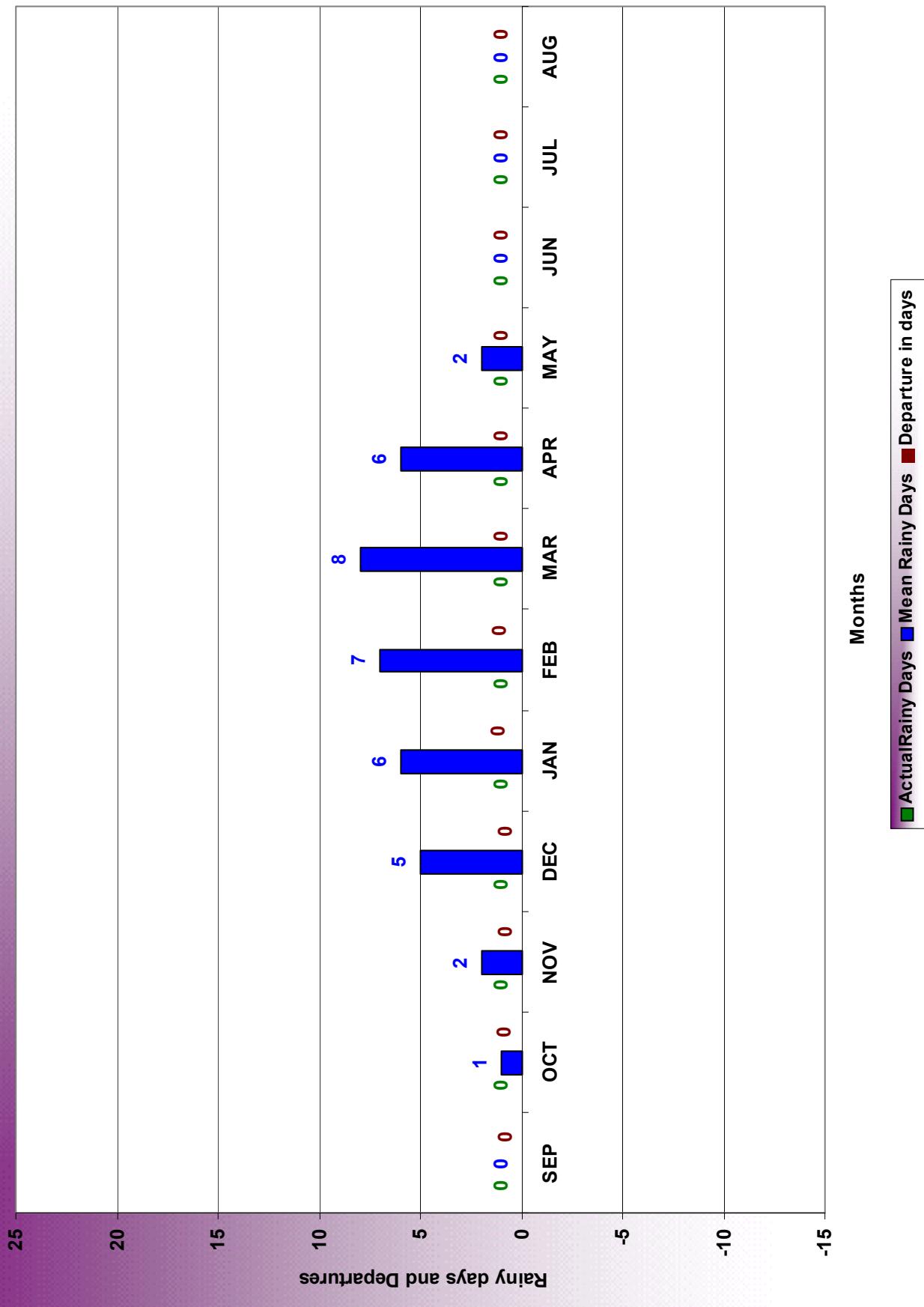
Baghlan Rainy Days Season 2007 - 2008 Compared to the Long-Term Average and Departure



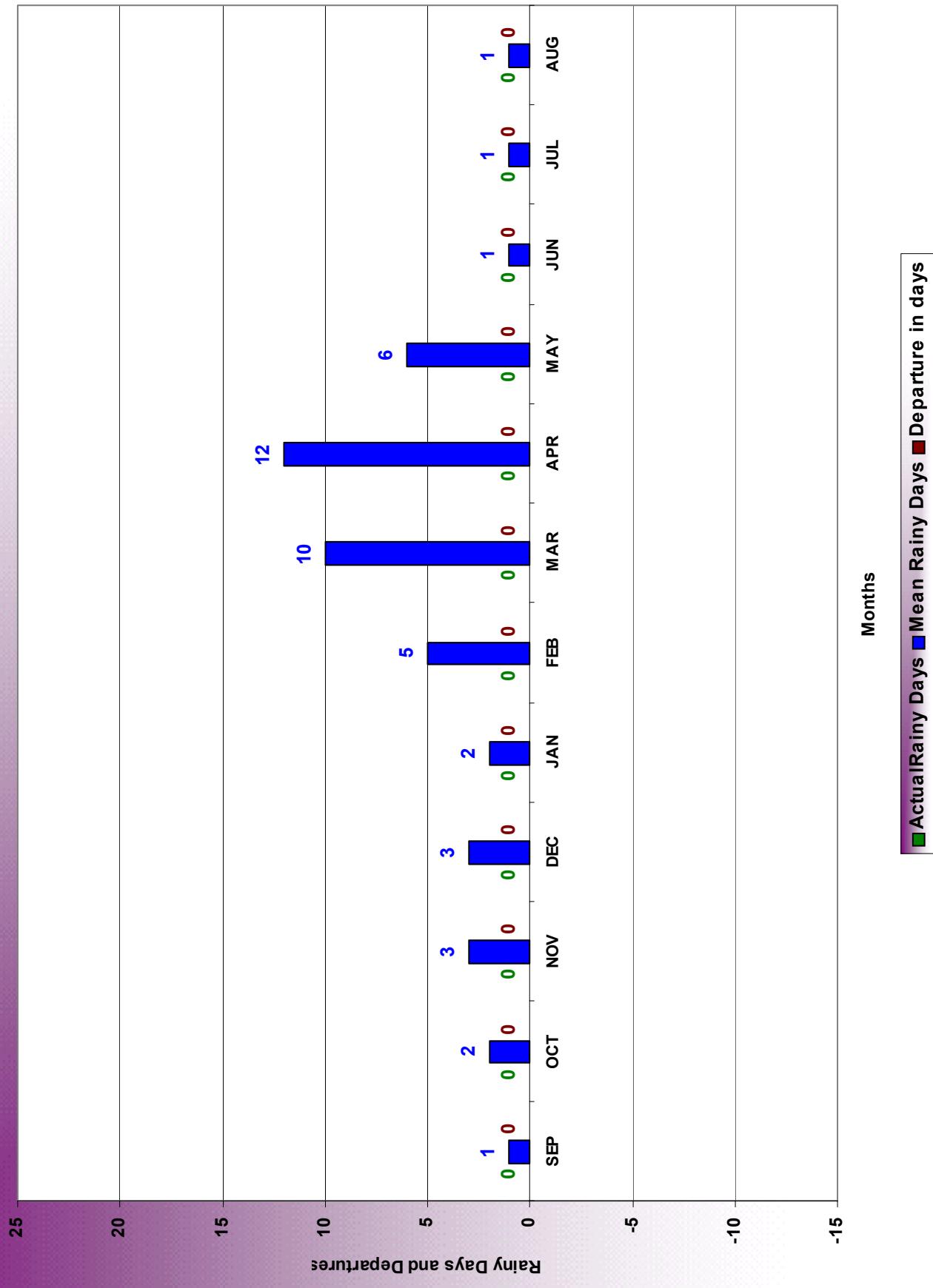
Faizabad Rainy Days Season 2007 - 2008 Compared to the Long-Term Average and Departure



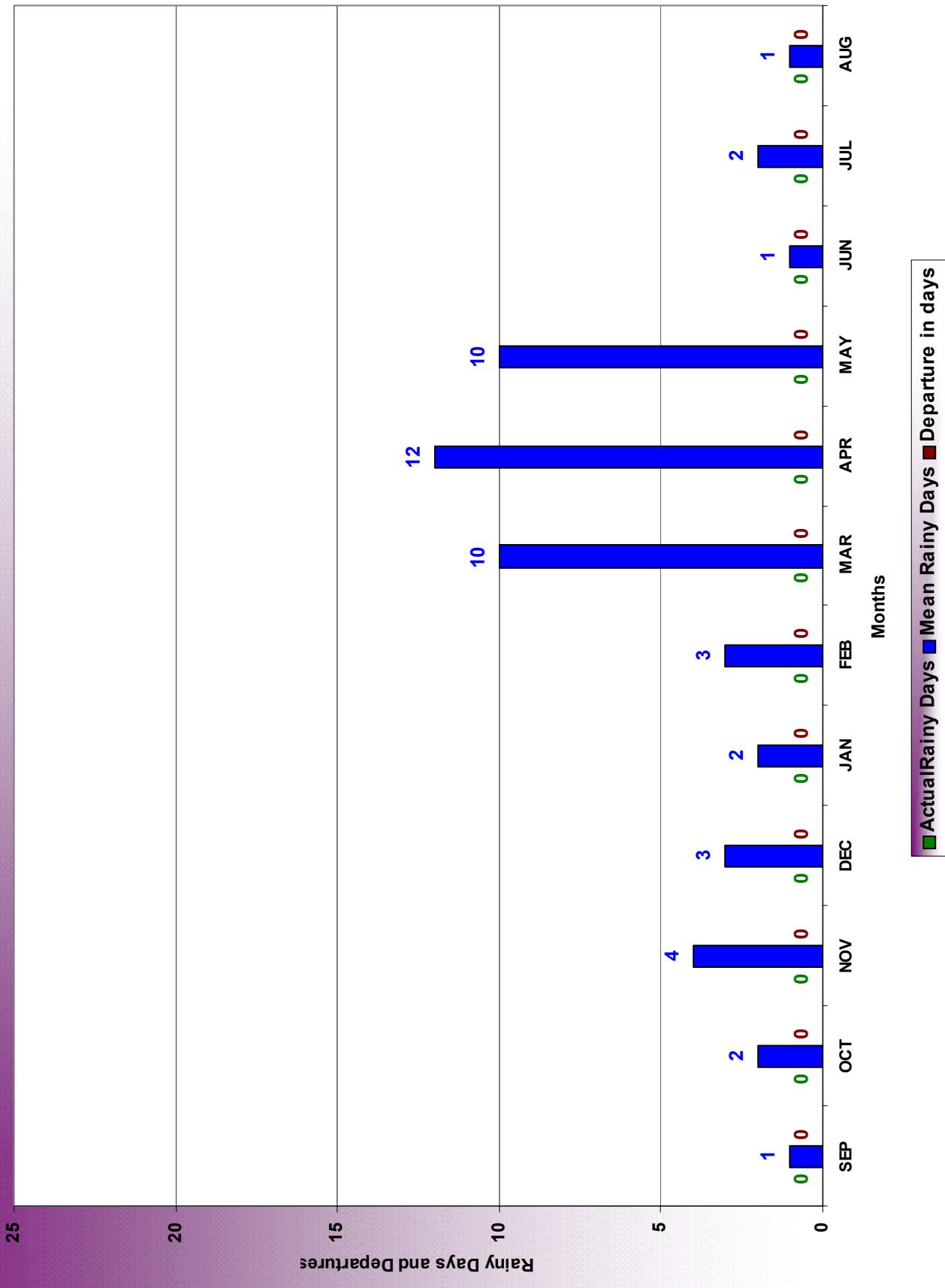
Hirat Rainy Days Season 2007 - 2008 Compared to the Long-Term Average and Departure



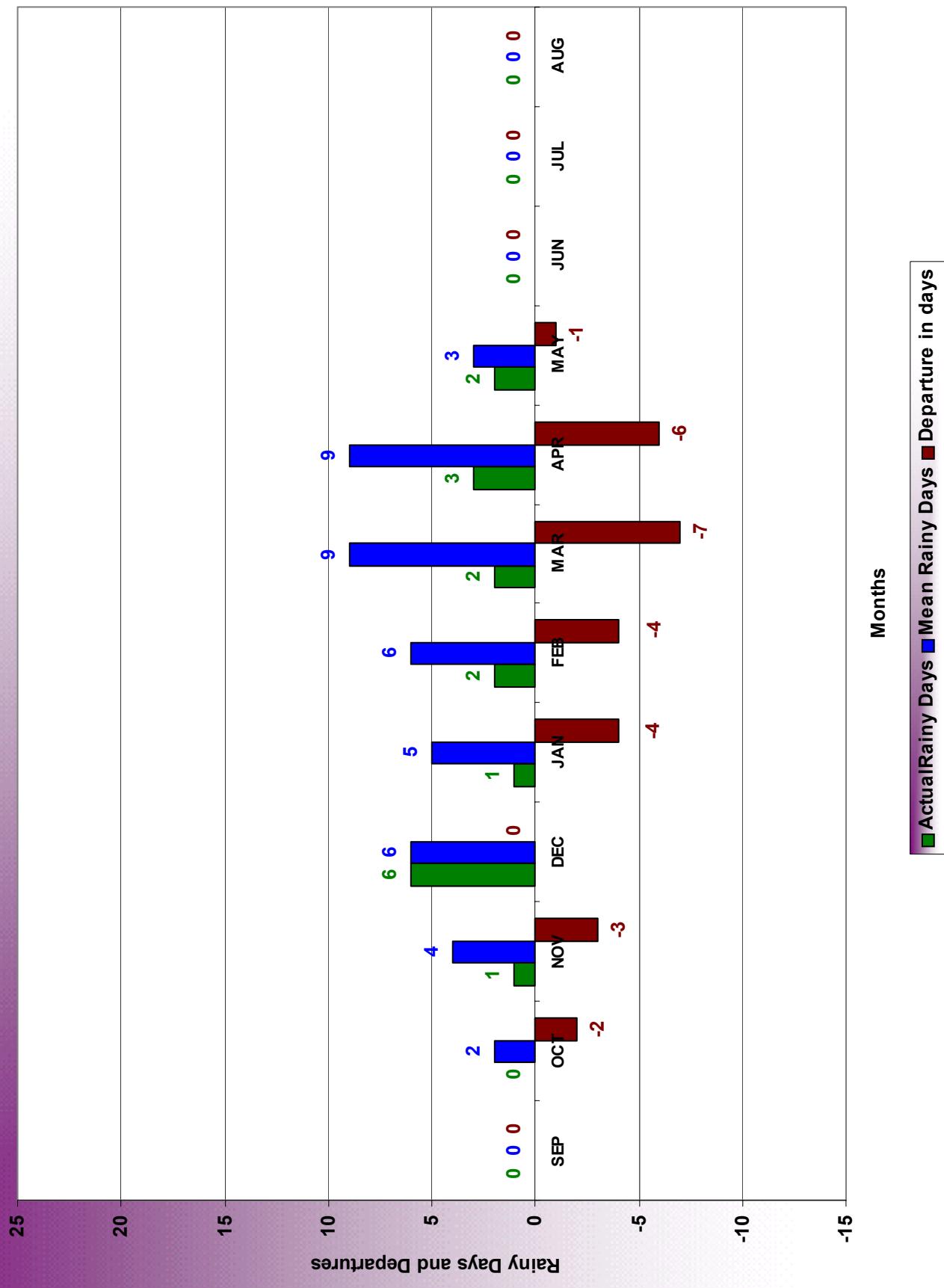
Jabulseraj Rainy Days Season 2007 - 2008 Compared to the Long-Term Average and Departure



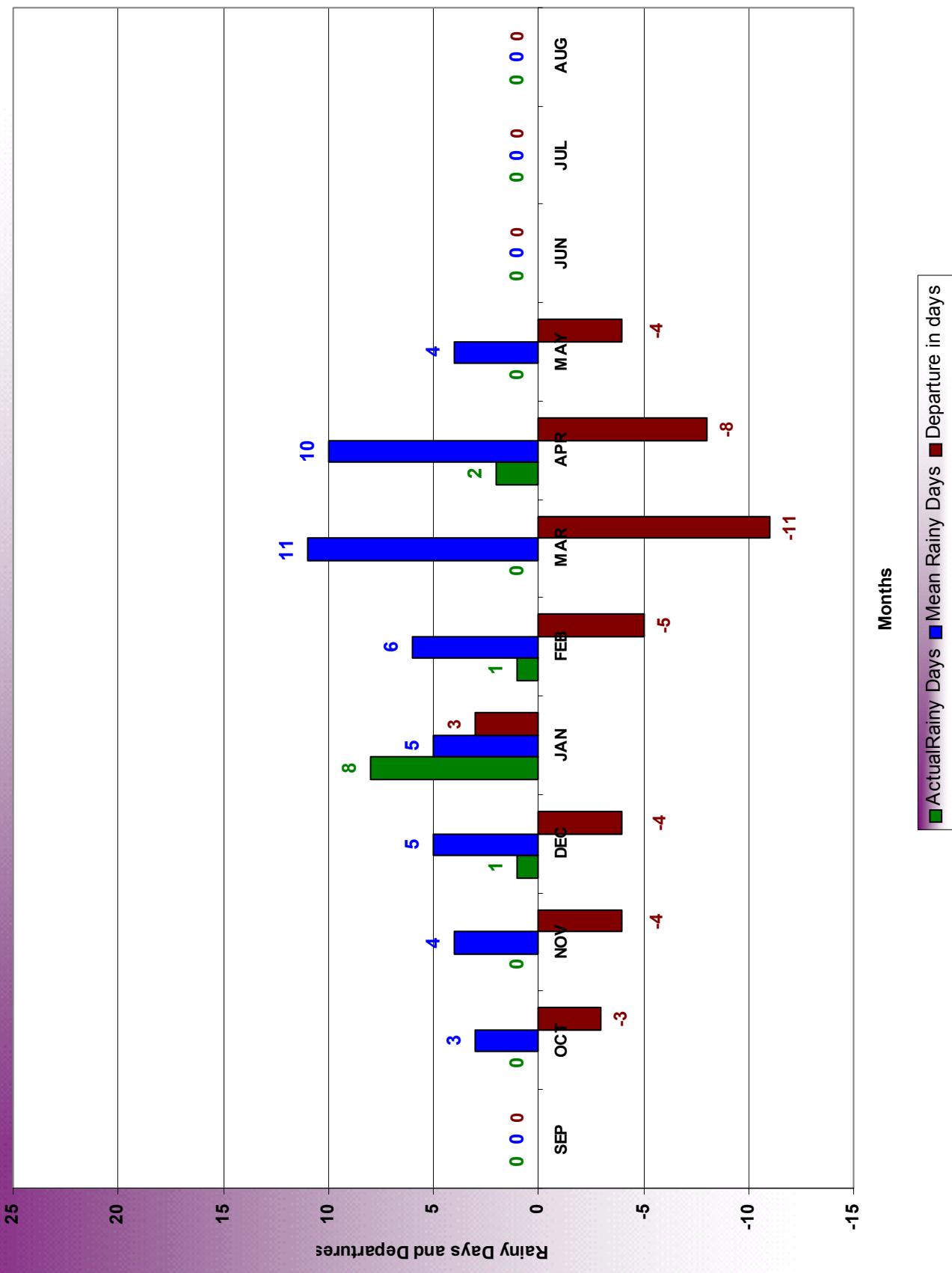
Kabul Rainy Days Season 2007 - 2008, Comparison to the Long-Term Average and Departure



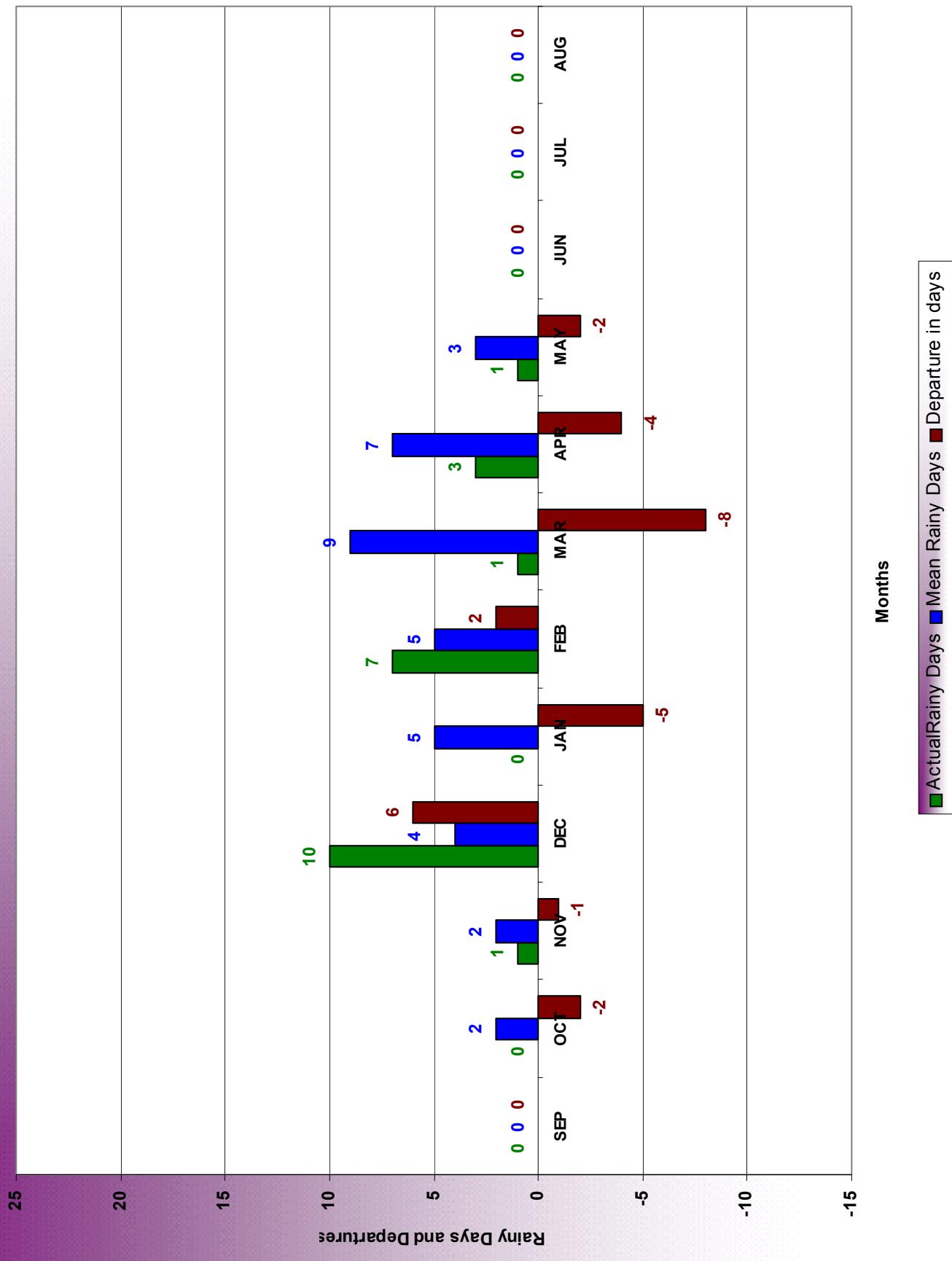
Mazarisharif Rainy Days Season 2007 - 2008 Compared to the Long-Term Average and Departure



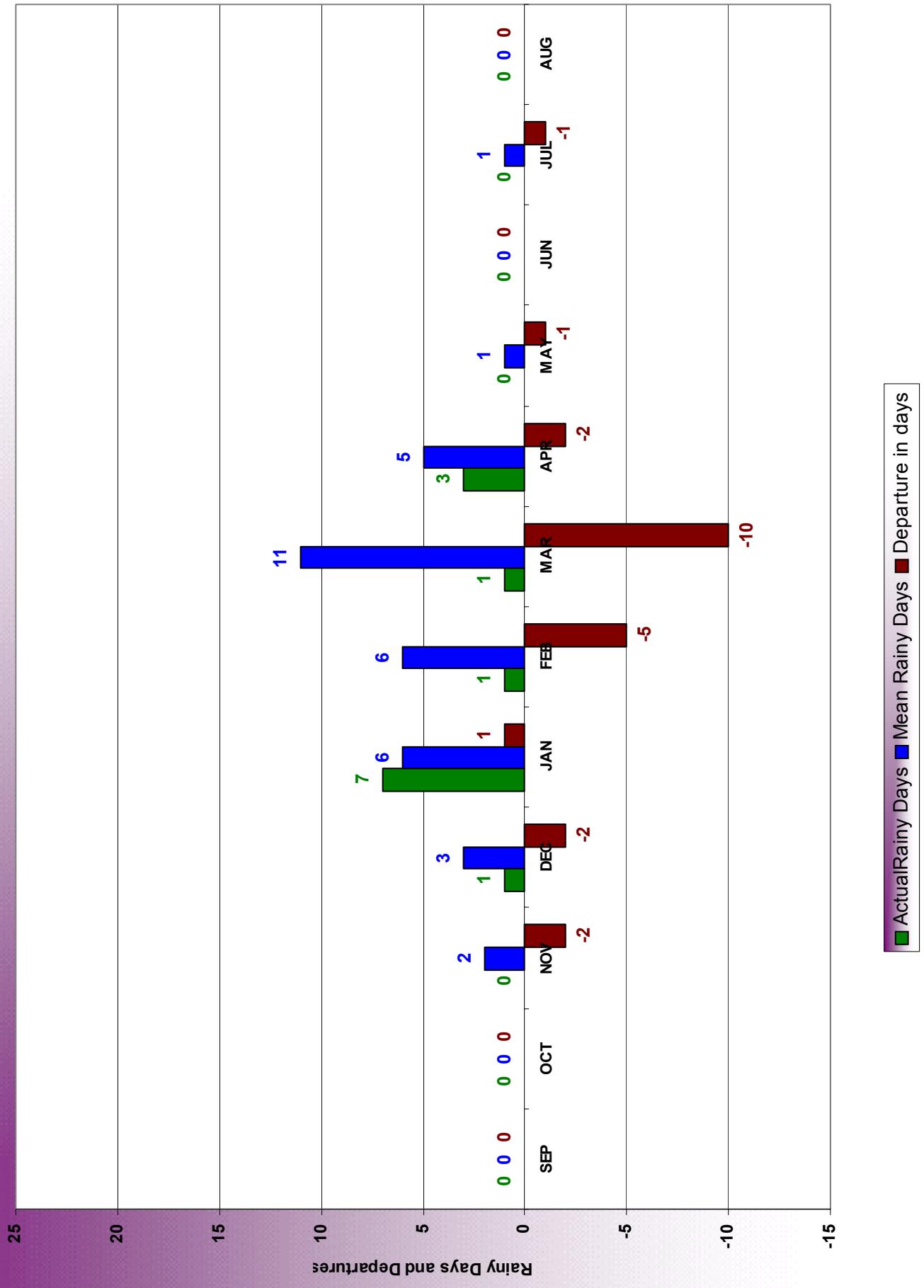
Miamana Rainy Days Season 2007 - 2008 Compared to the Long-Term Average and Departure



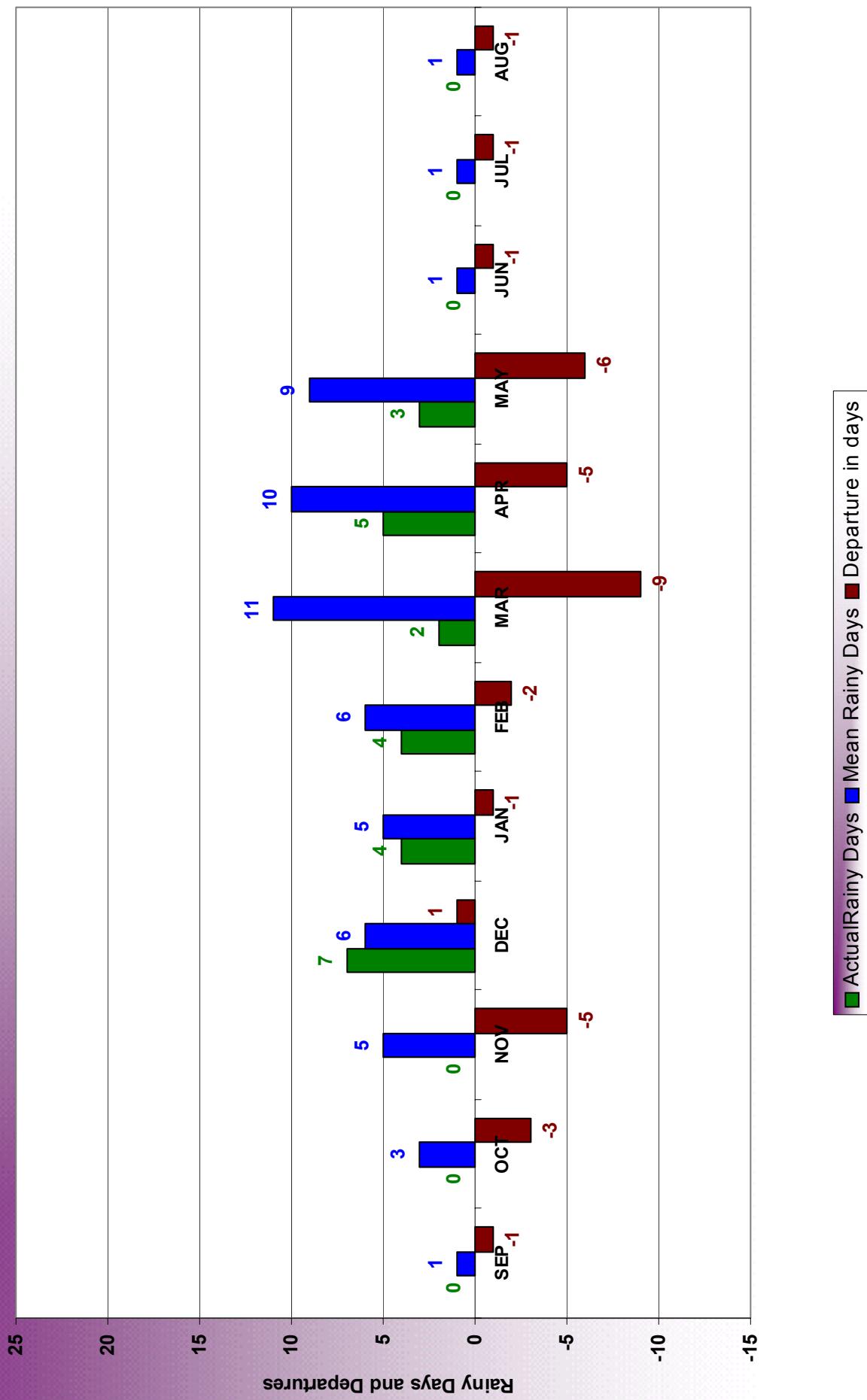
Shebirghan Rainy Days Season 2007 - 2008 Compared to the Long-Term Average and Departure



Kandahar Rainy Days Season 2007 - 2008 Compared to the Long-Term Average and Departure

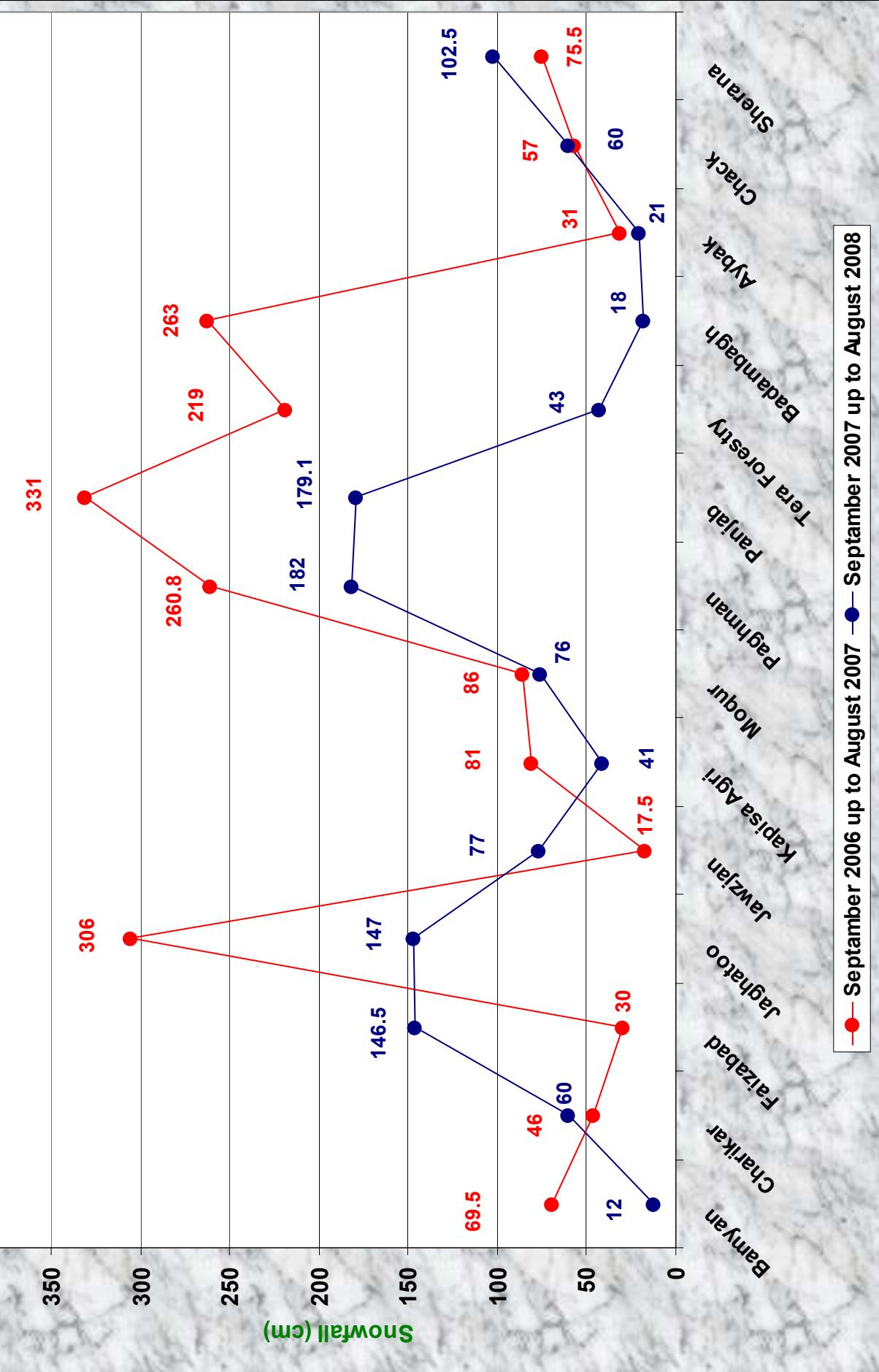


Kunduz Rainy Days Season 2007 - 2008 Compared to the Long-Term Average and Departure



Snowfall (cm) Current Year
Compared with
Last Year
Agricultural Season 2007- 2008

Comparison of Snowfall (cm) Current Year with Last Year



Average Temperature 2007-2008
Compared with
Long Term Average

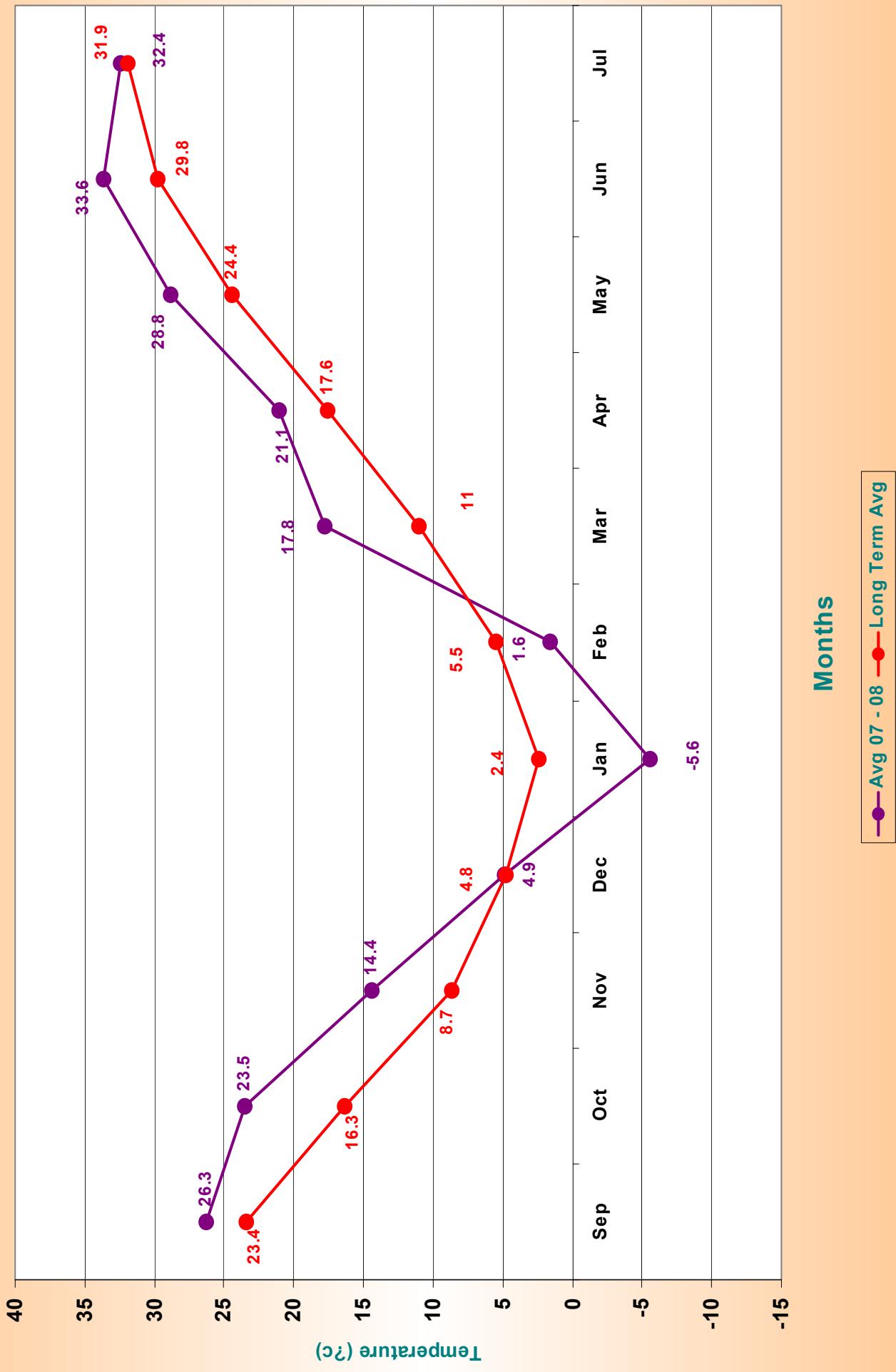
Kabul Average Temperature 2007 - 2008 Compared to the Long Term Average



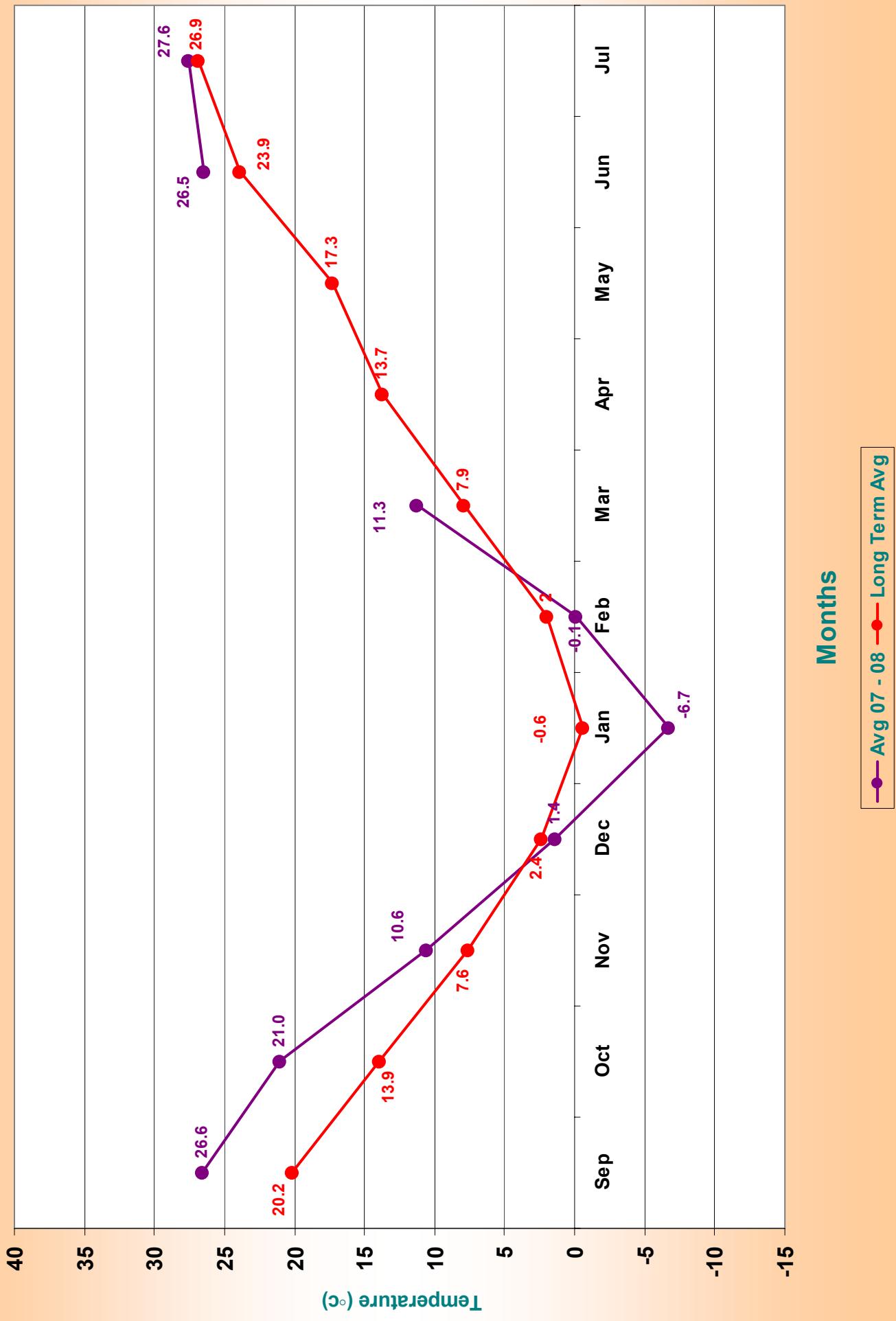
Hirat Average Temperature 2007 - 2008 Compared to the Long Term Average



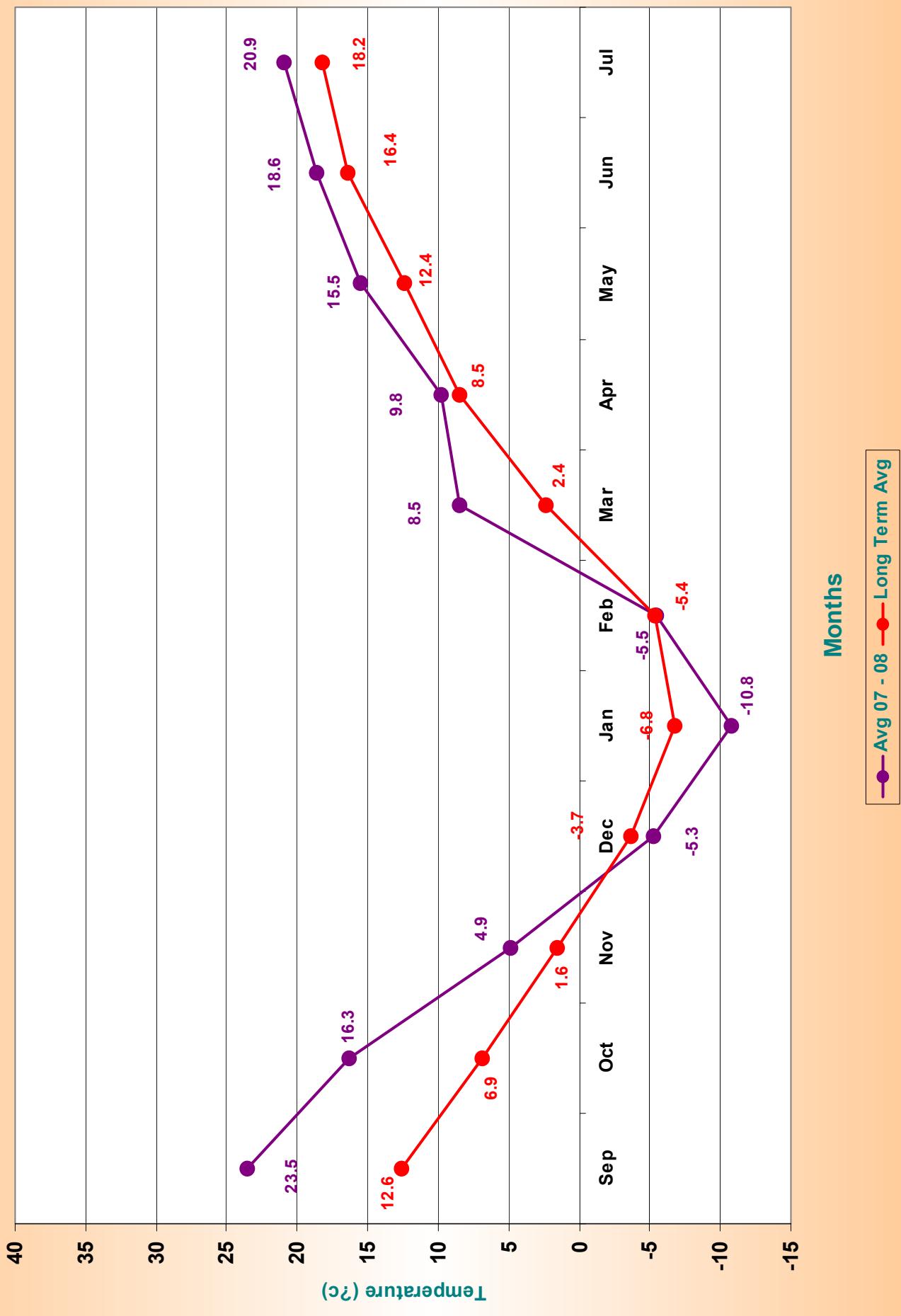
Mazarisharif Average Temperature 2007 - 2008 Compared to the Long Term Average



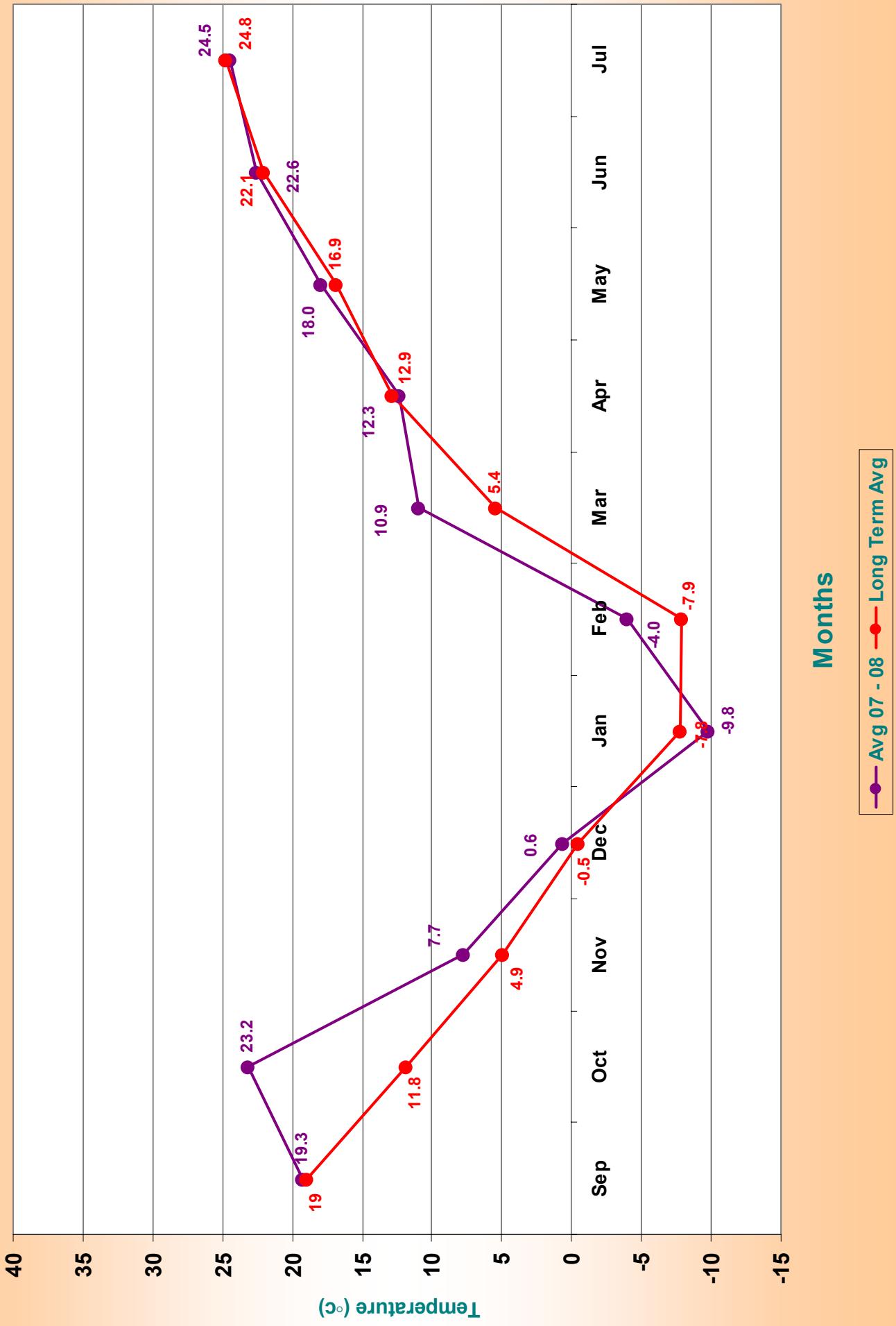
Faizabad Average Temperature 2007 - 2008 Compared to the Long Term Average



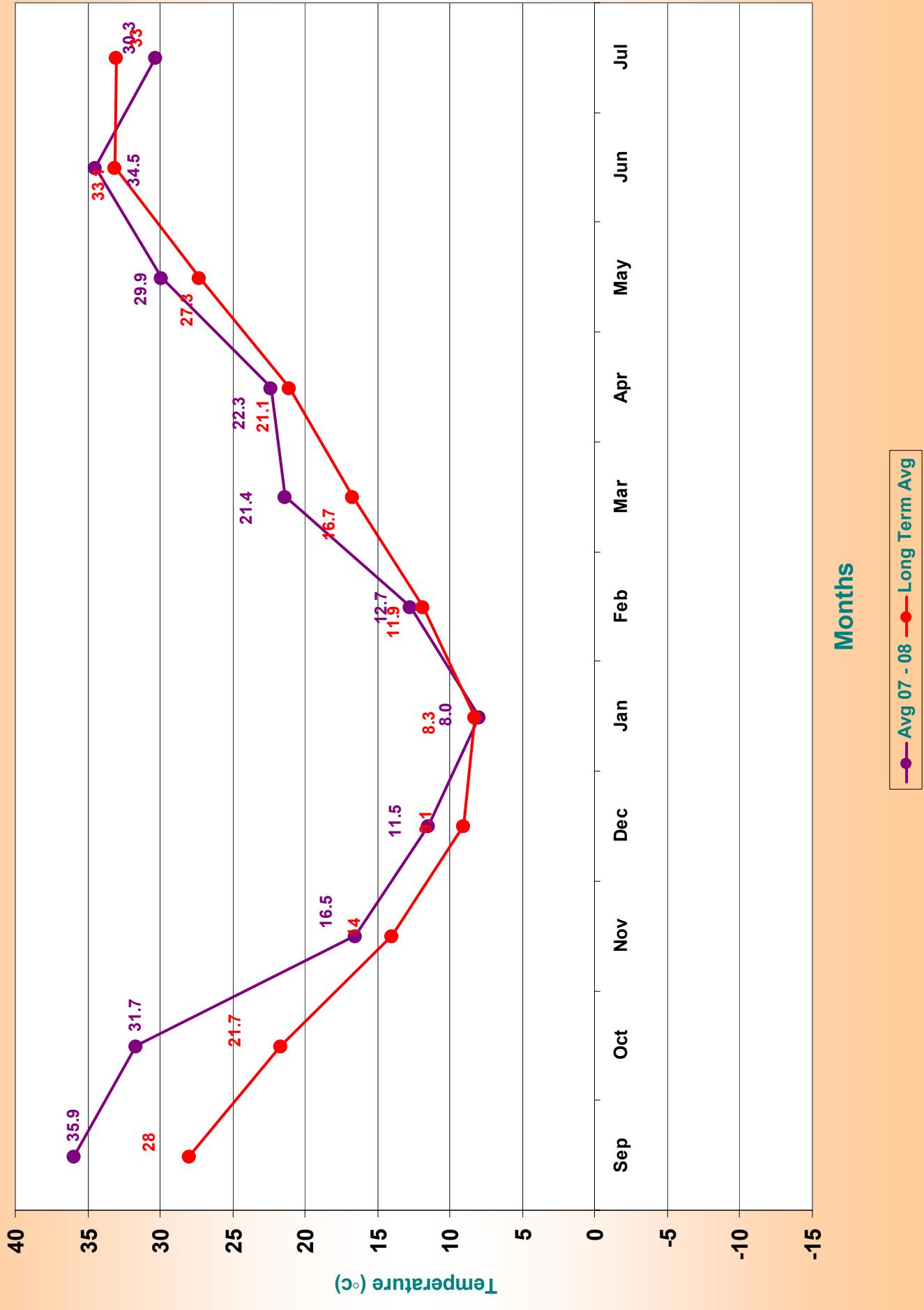
Bamyan Average Temperature 2007 - 2008 Compared to the Long Term Average



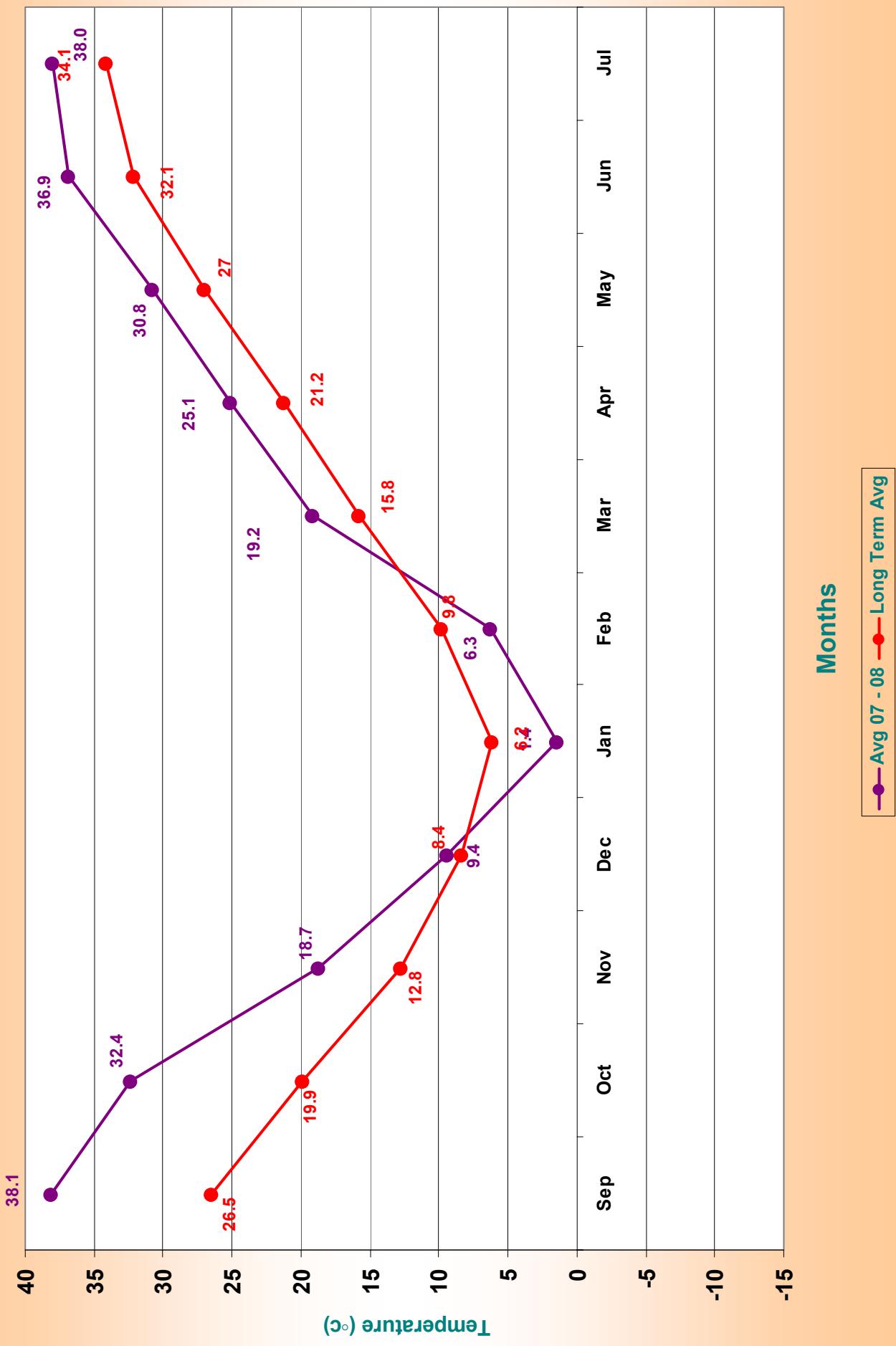
Logar Average Temperature 2007 - 2008 Compared to the Long Term Average



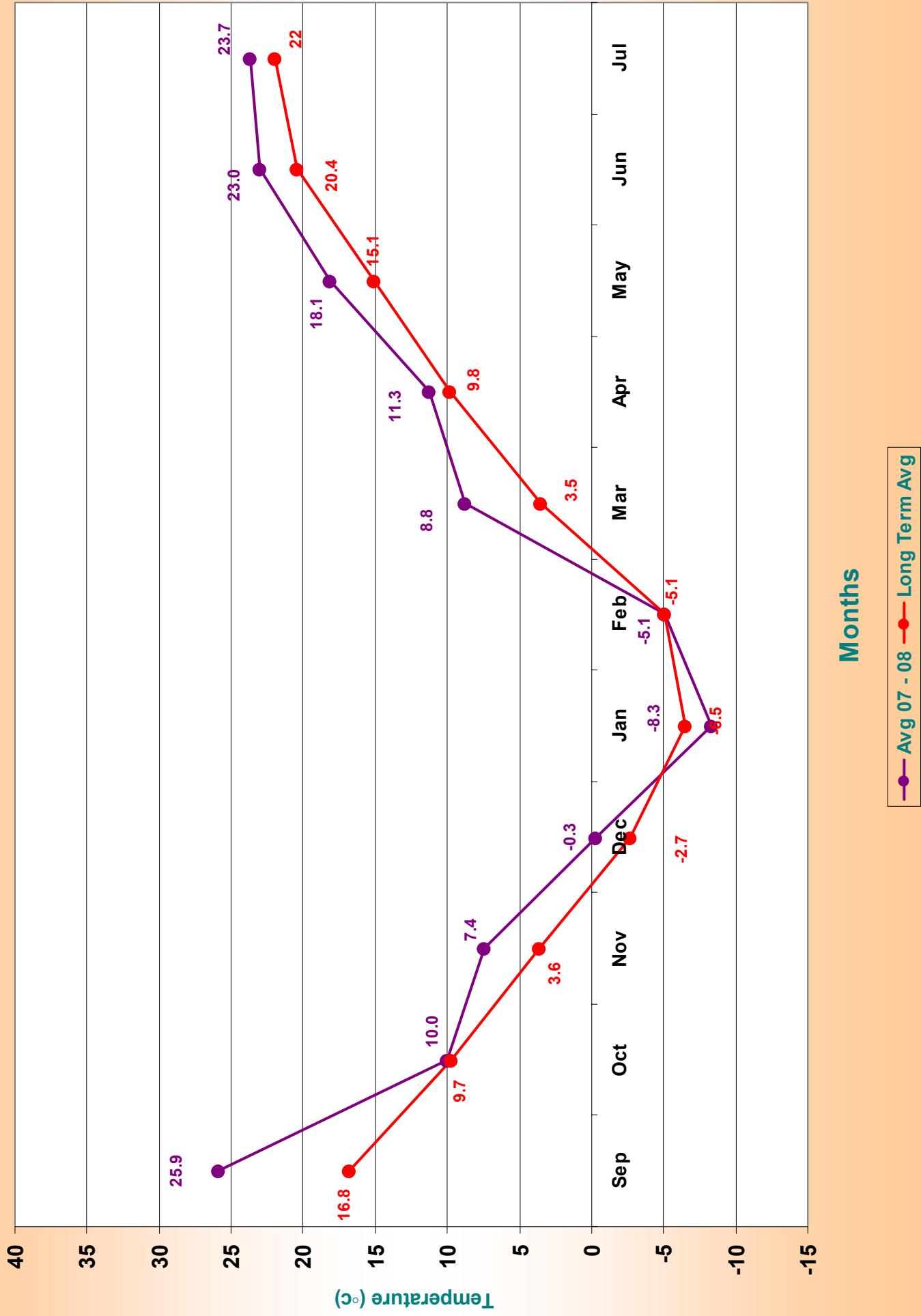
Jalalabad Average Temperature 2007 - 2008 Compared to the Long Term Average



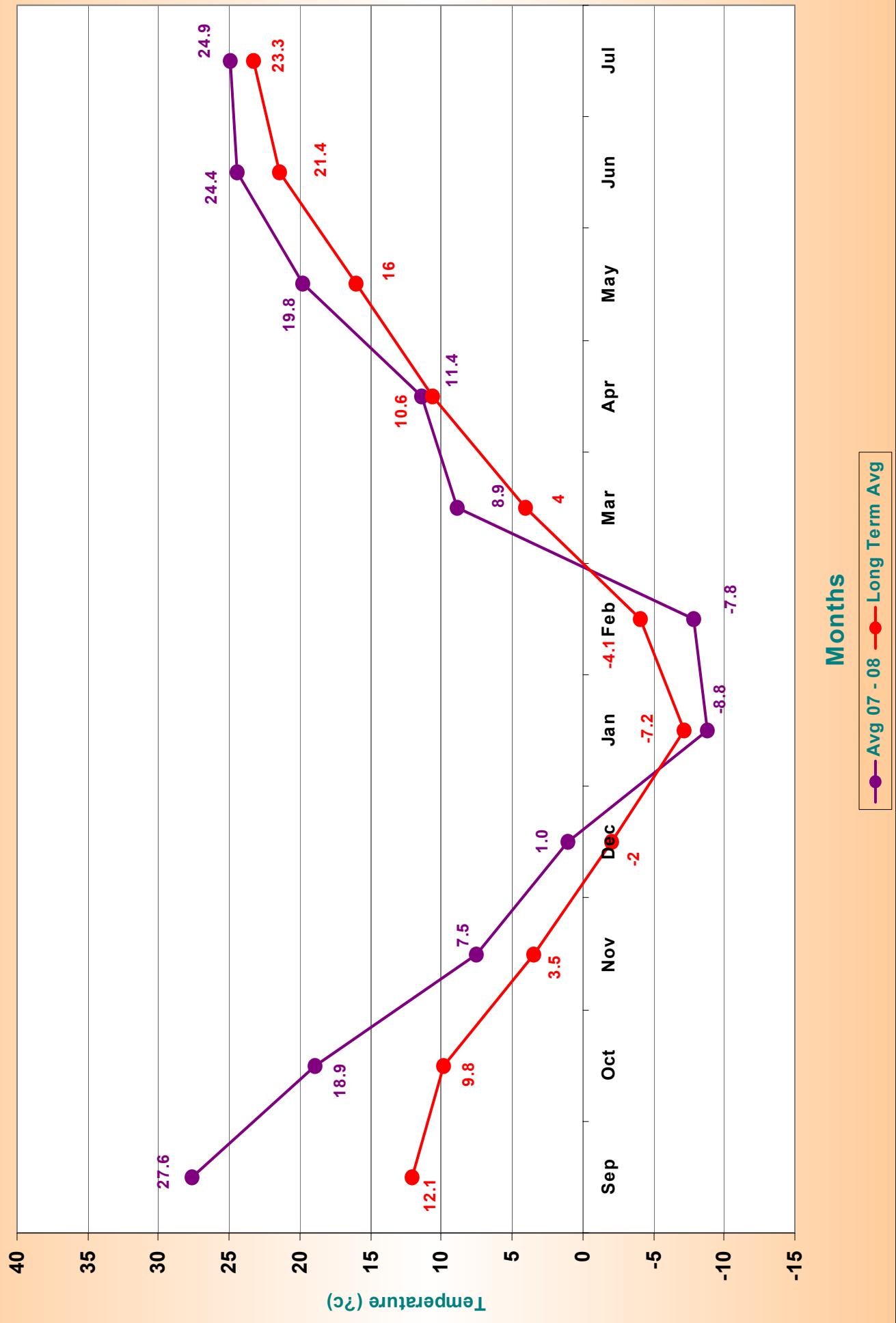
Farah Average Temperature 2007 - 2008 Compared to the Long Term Average



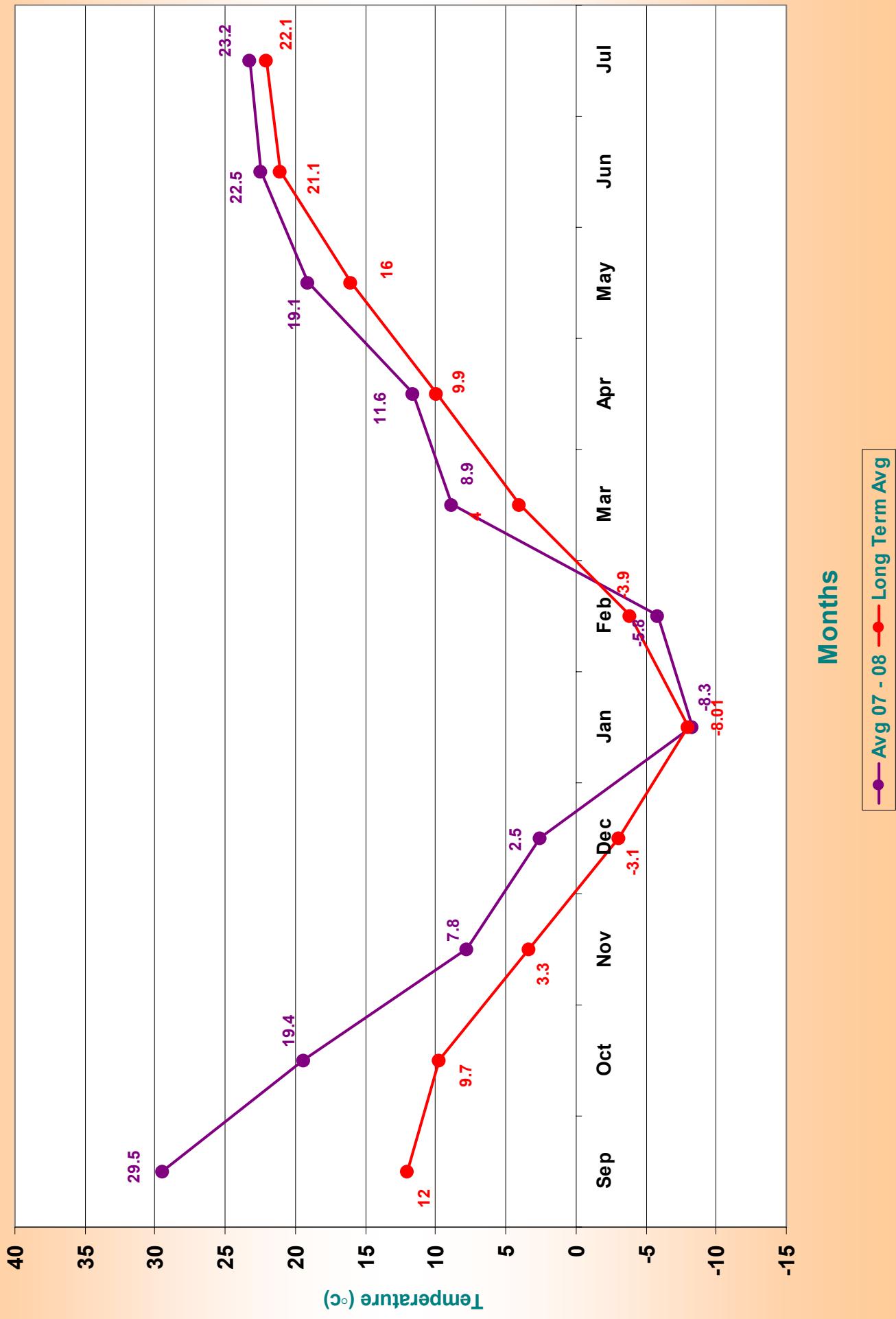
Gardiz Average Temperature 2007 - 2008 Compared to the Long Term Average



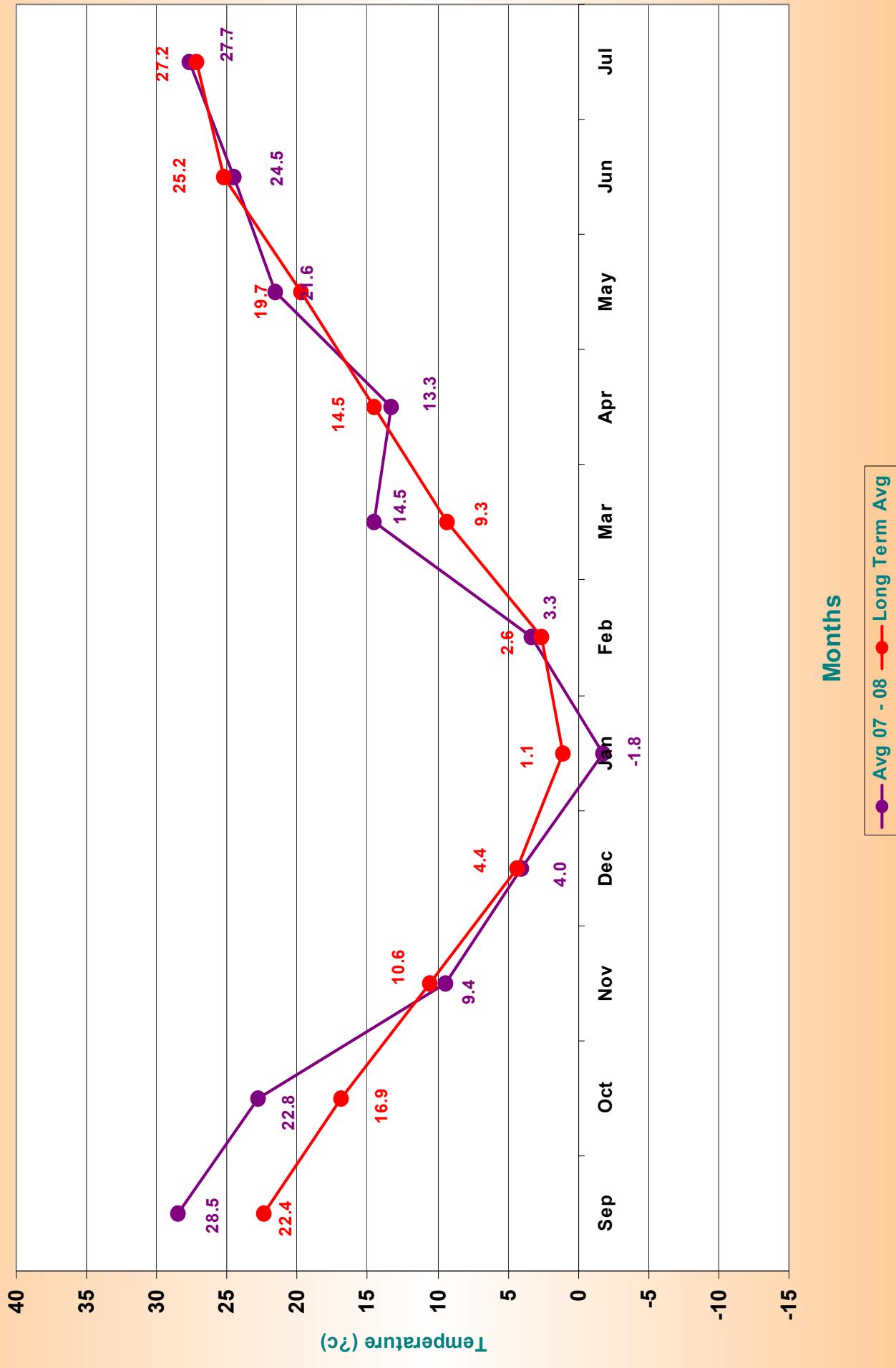
Ghazni Average Temperature 2007 - 2008 Compared to the Long Term Average



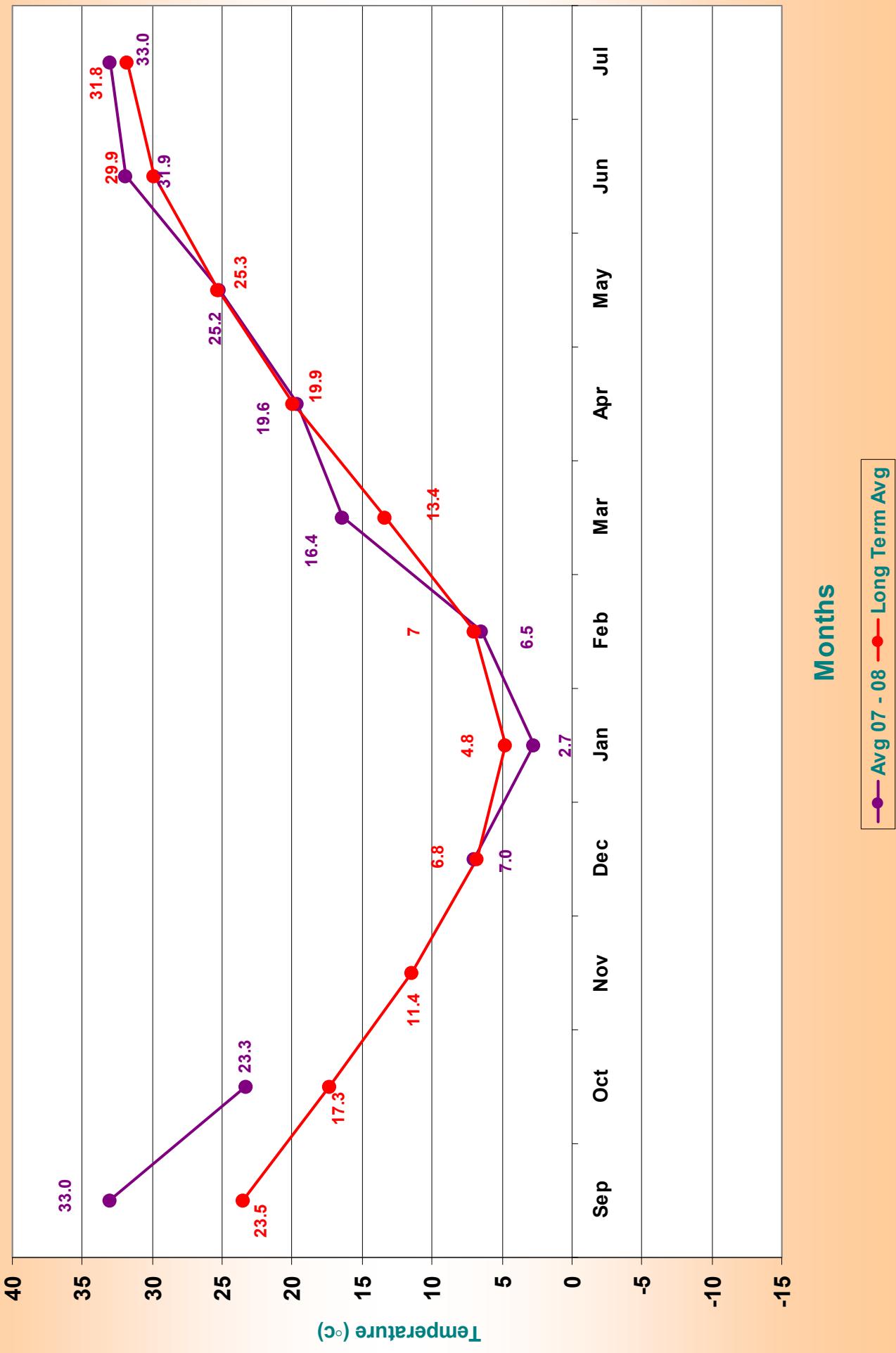
Sarday Average Temperature 2007 - 2008 Compared to the Long Term Average



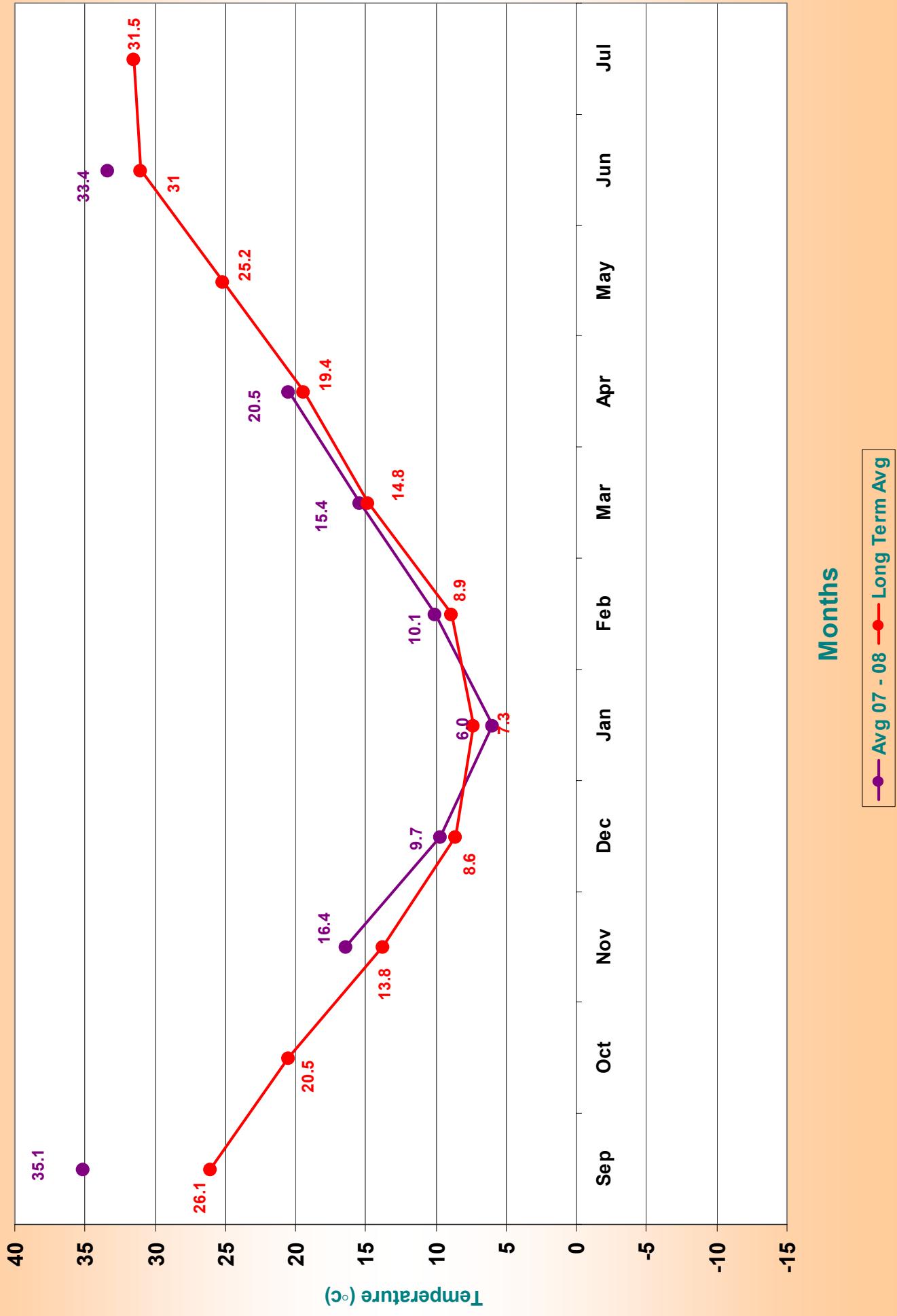
Jabulseraj Average Temperature 2007 - 2008 Compared to the Long Term Average



Kandahar Average Temperature 2007 - 2008 Compared to the Long Term Average

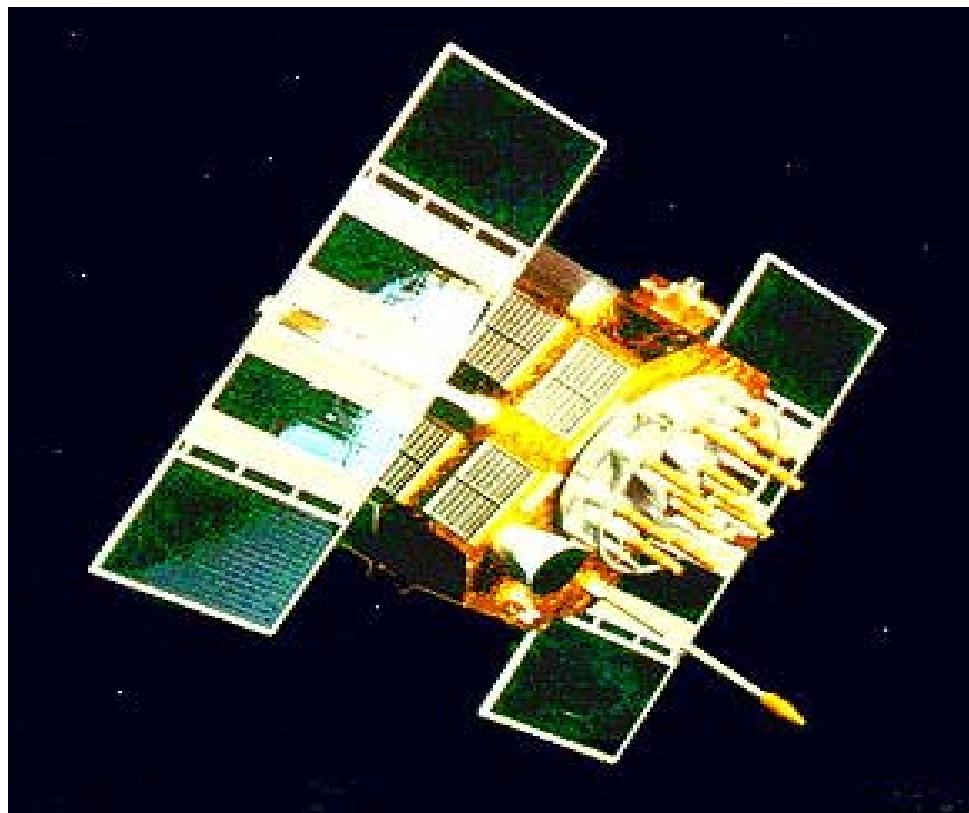


Laghman Average Temperature 2007 - 2008 Compared to the Long Term Average

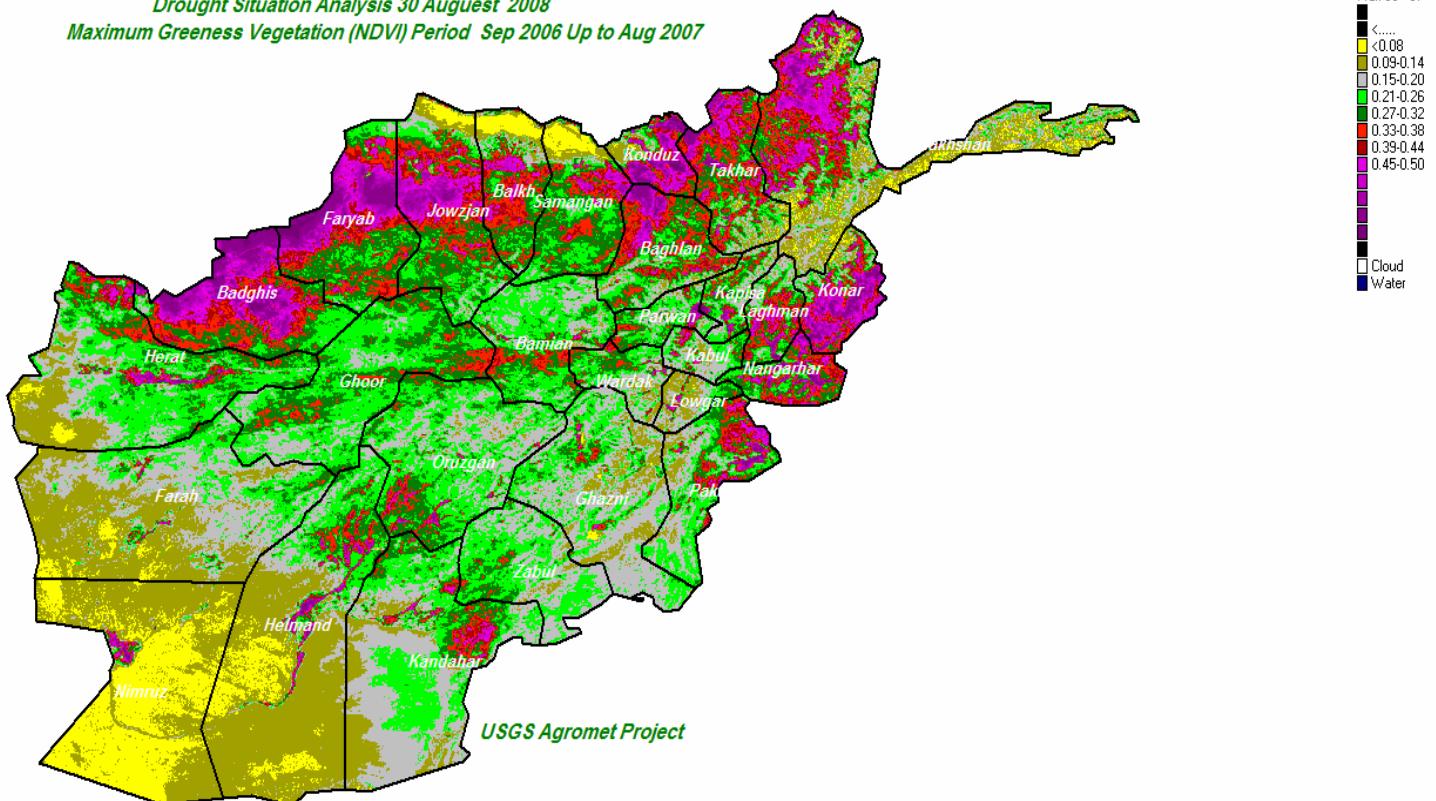


Normalized Difference Vegetation Index (NDVI)

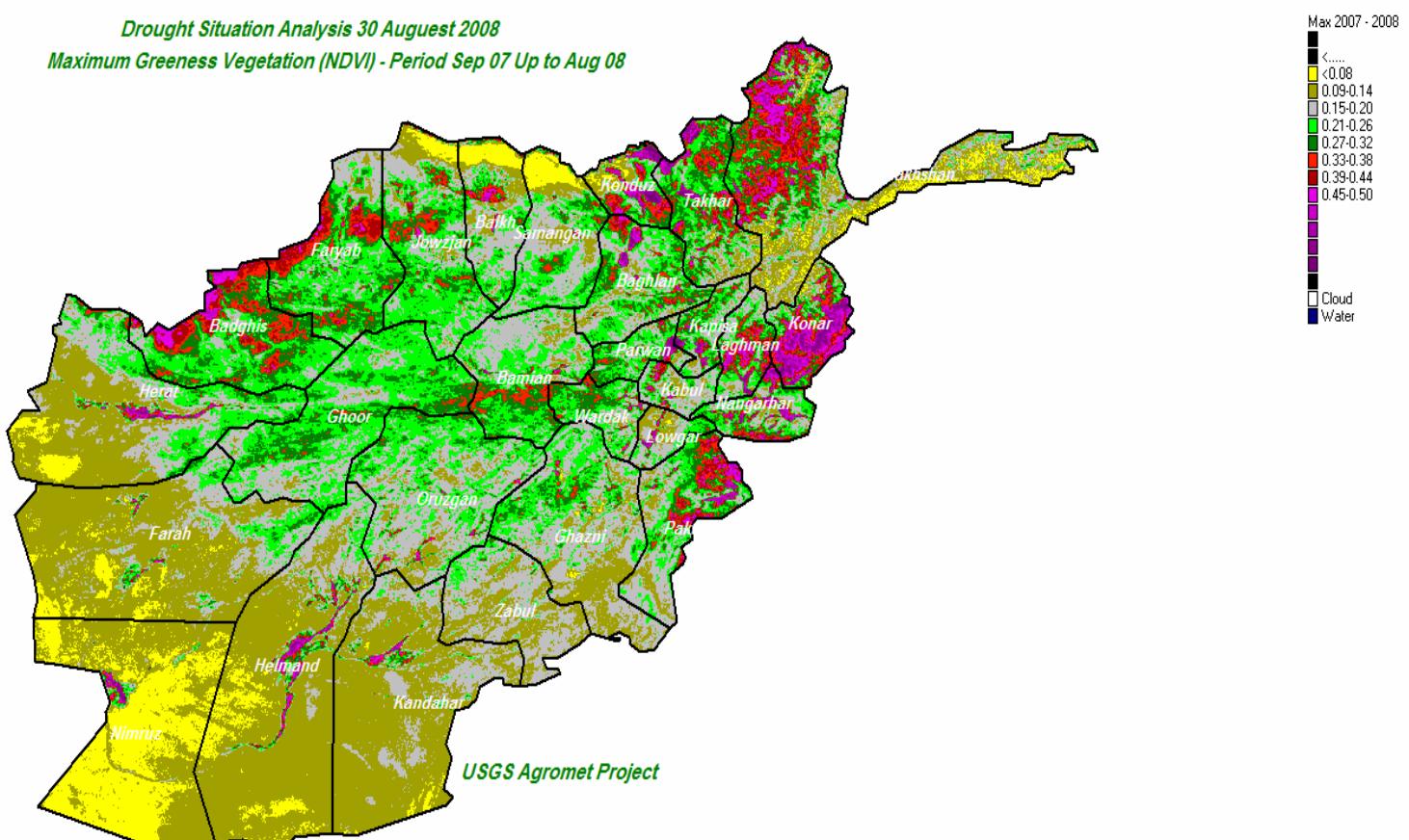
Agricultural Season 2007- 2008



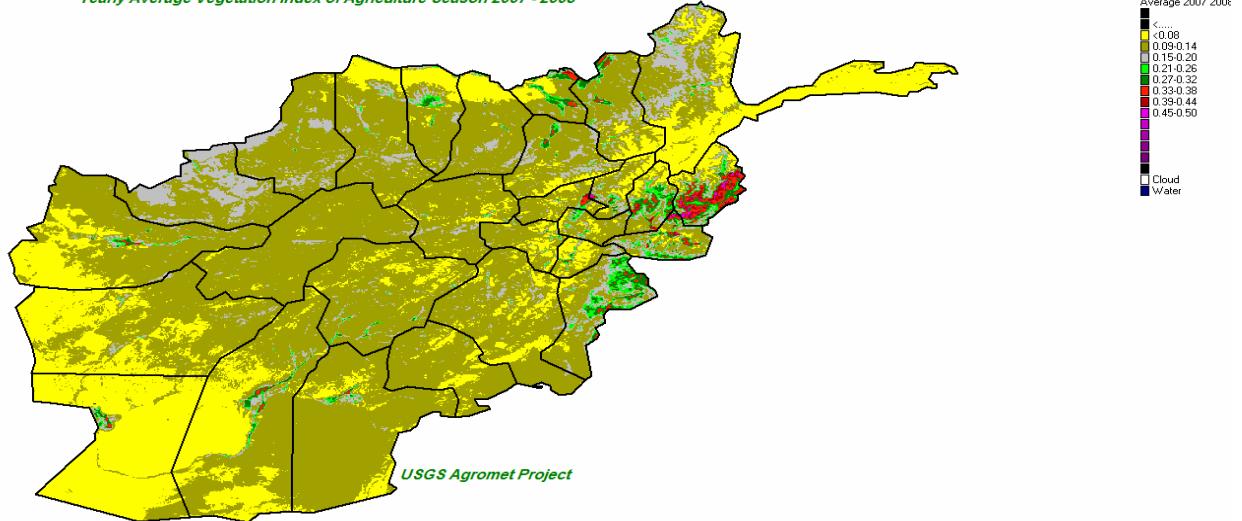
Drought Situation Analysis 30 August 2008
Maximum Greenness Vegetation (NDVI) Period Sep 2006 Up to Aug 2007



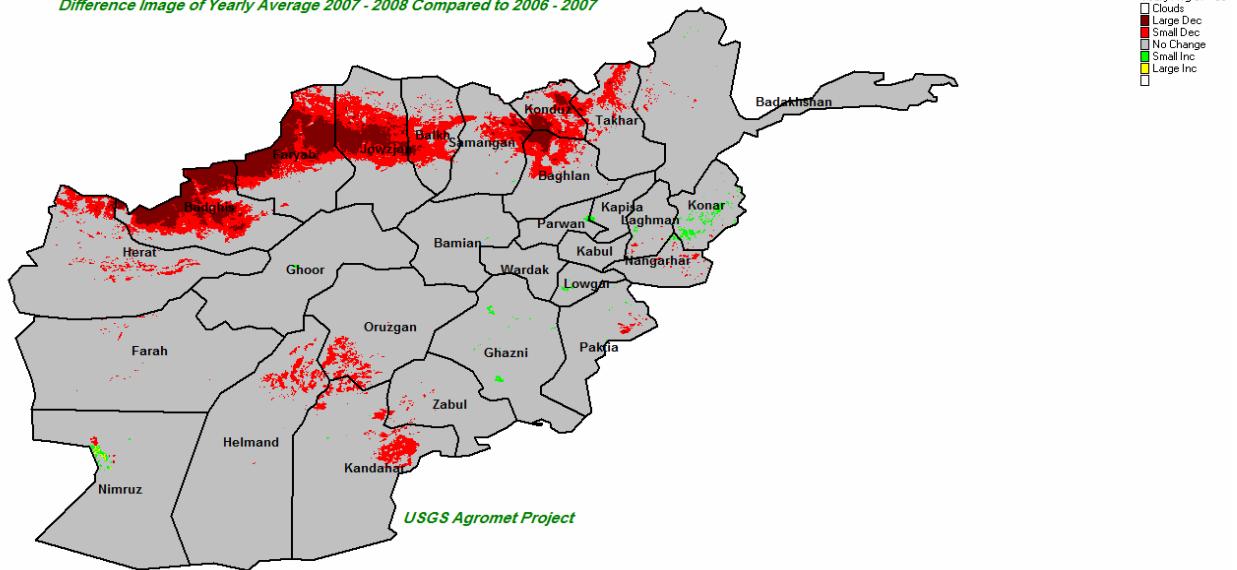
Drought Situation Analysis 30 August 2008
Maximum Greenness Vegetation (NDVI) - Period Sep 07 Up to Aug 08



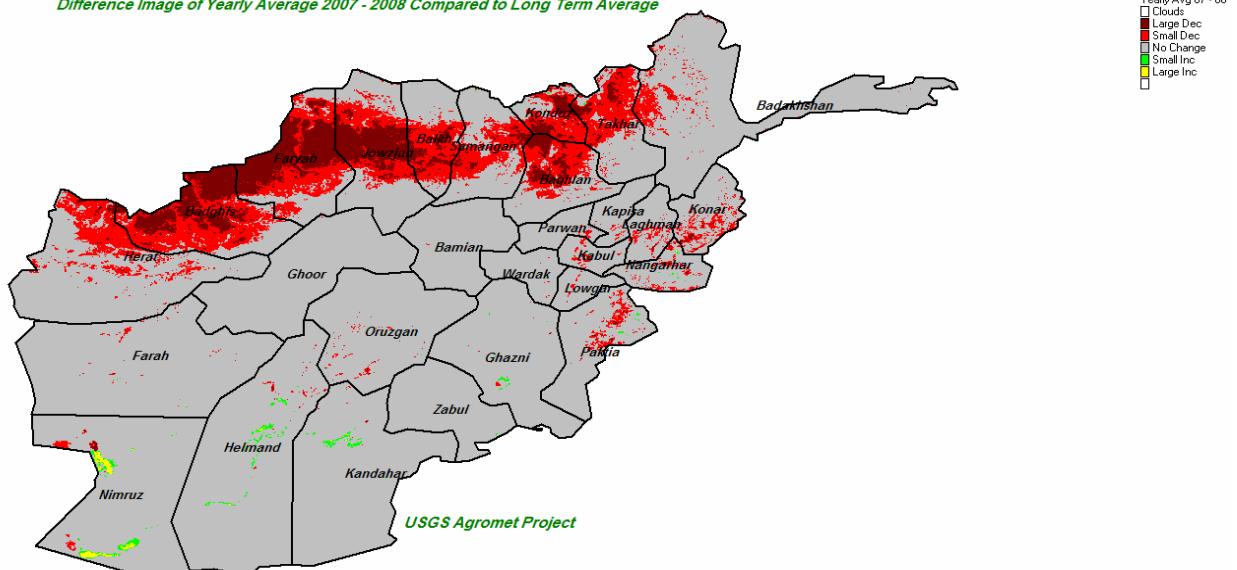
Yearly Average Vegetation Index of Agriculture Season 2007 - 2008



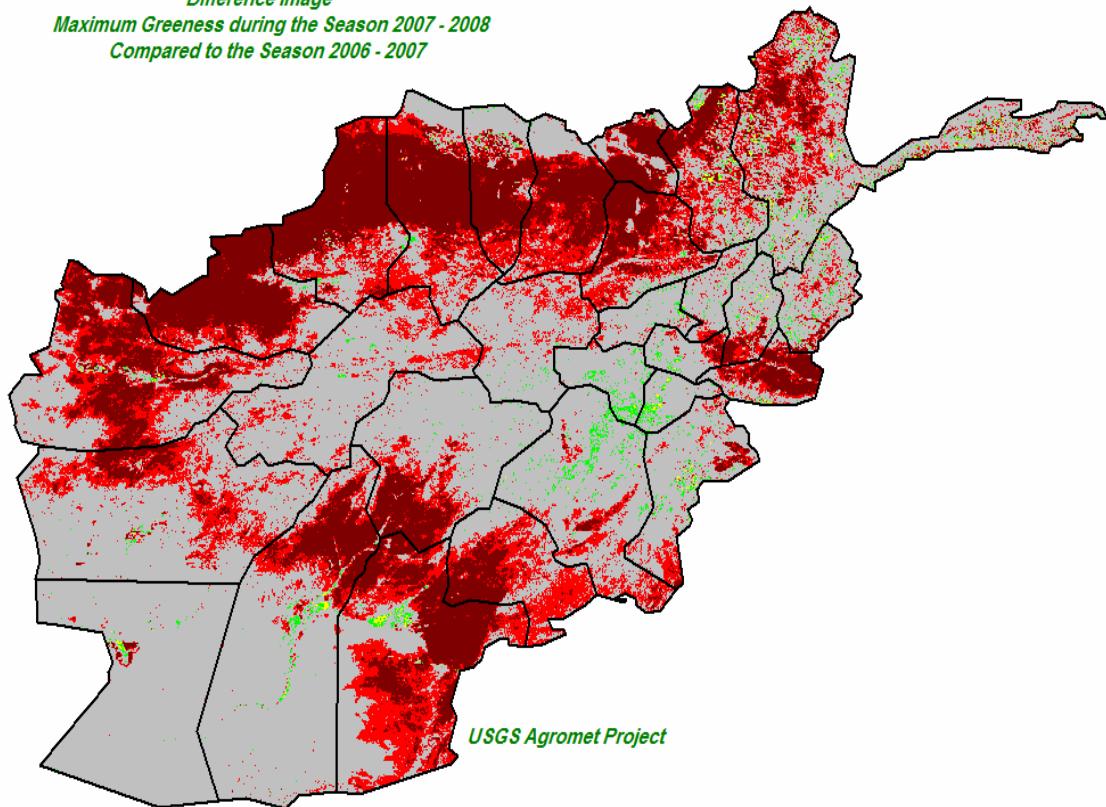
Difference Image of Yearly Average 2007 - 2008 Compared to 2006 - 2007



Difference Image of Yearly Average 2007 - 2008 Compared to Long Term Average

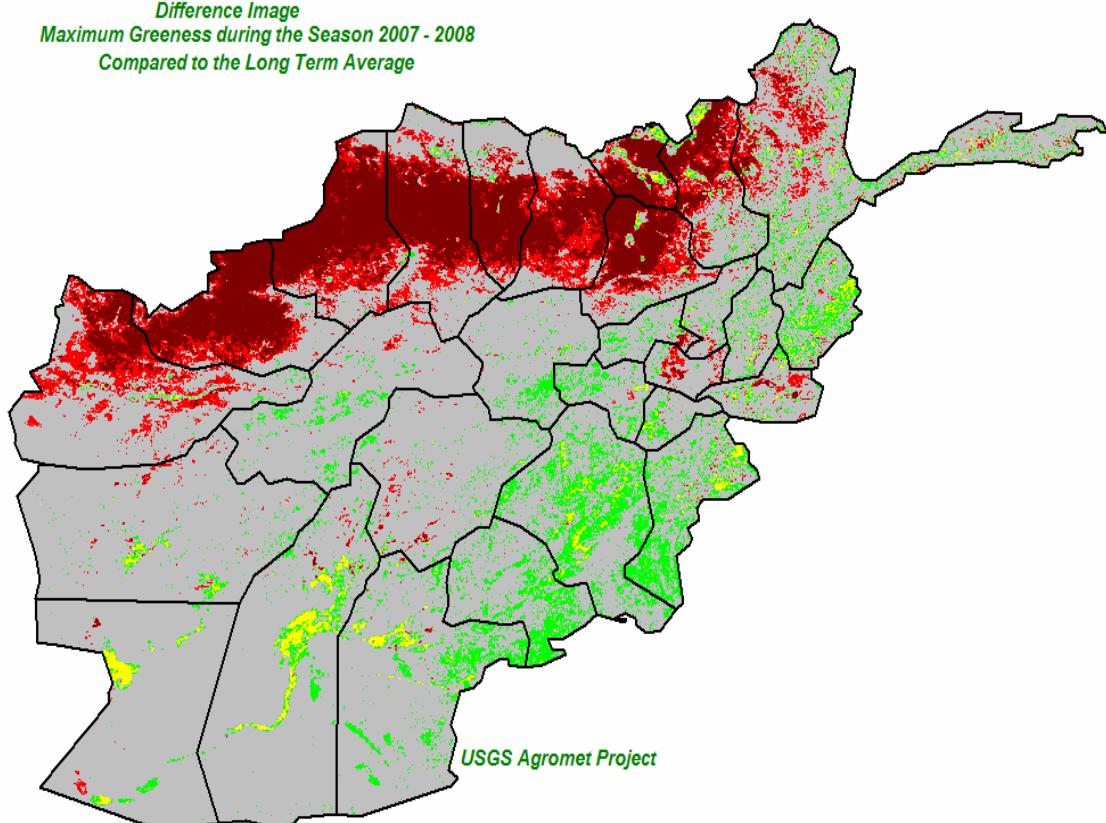


Difference Image
Maximum Greenness during the Season 2007 - 2008
Compared to the Season 2006 - 2007



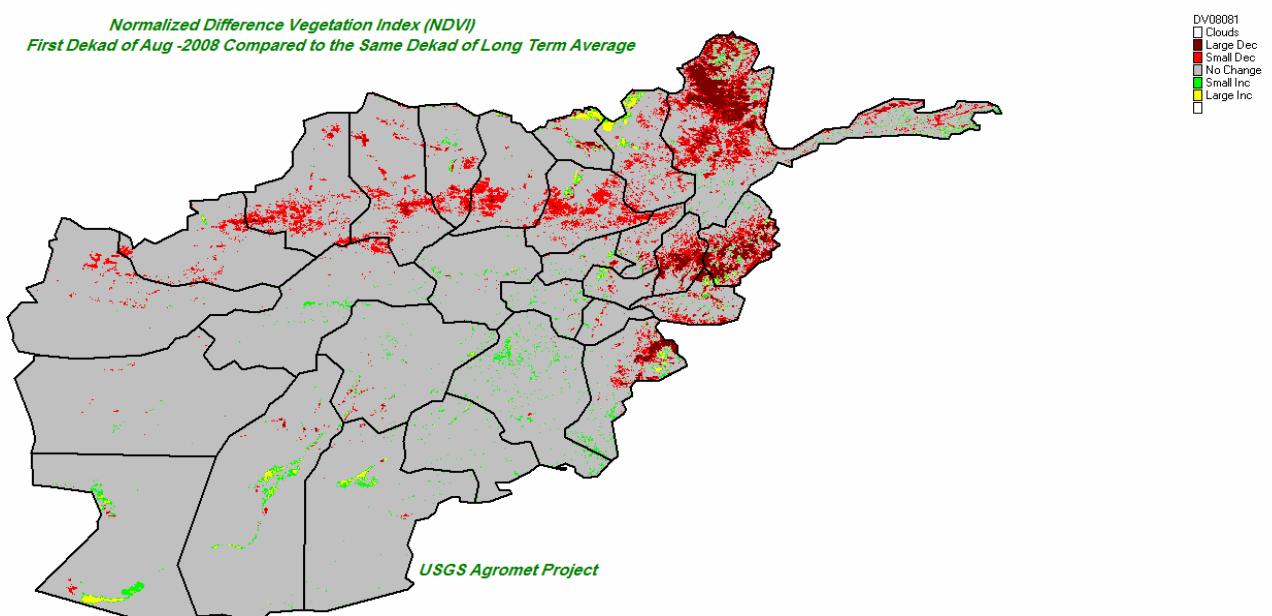
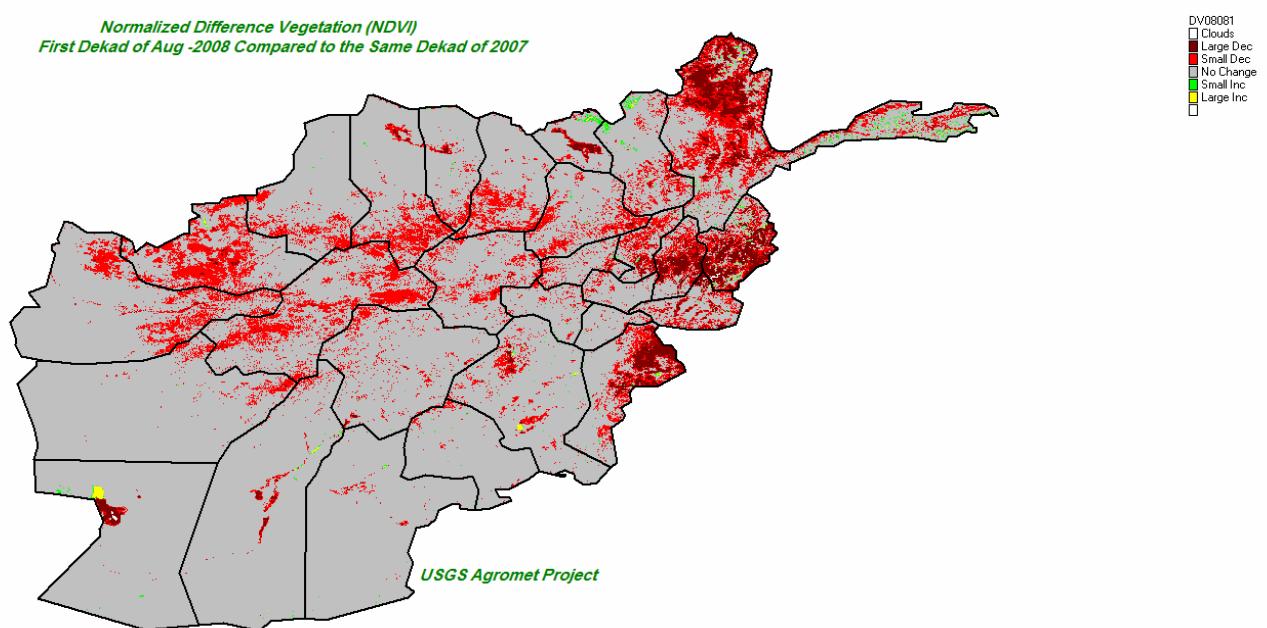
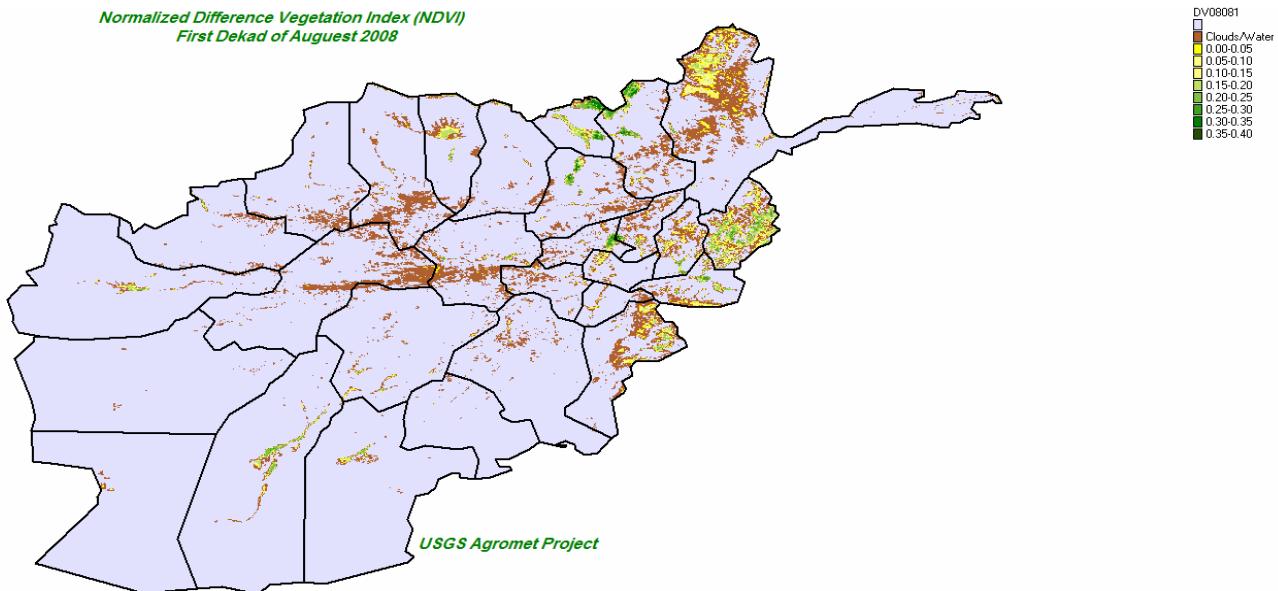
Max 2007 - 2008
Clouds
Large Dec
Small Dec
No Change
Small Inc
Large Inc

Difference Image
Maximum Greenness during the Season 2007 - 2008
Compared to the Long Term Average

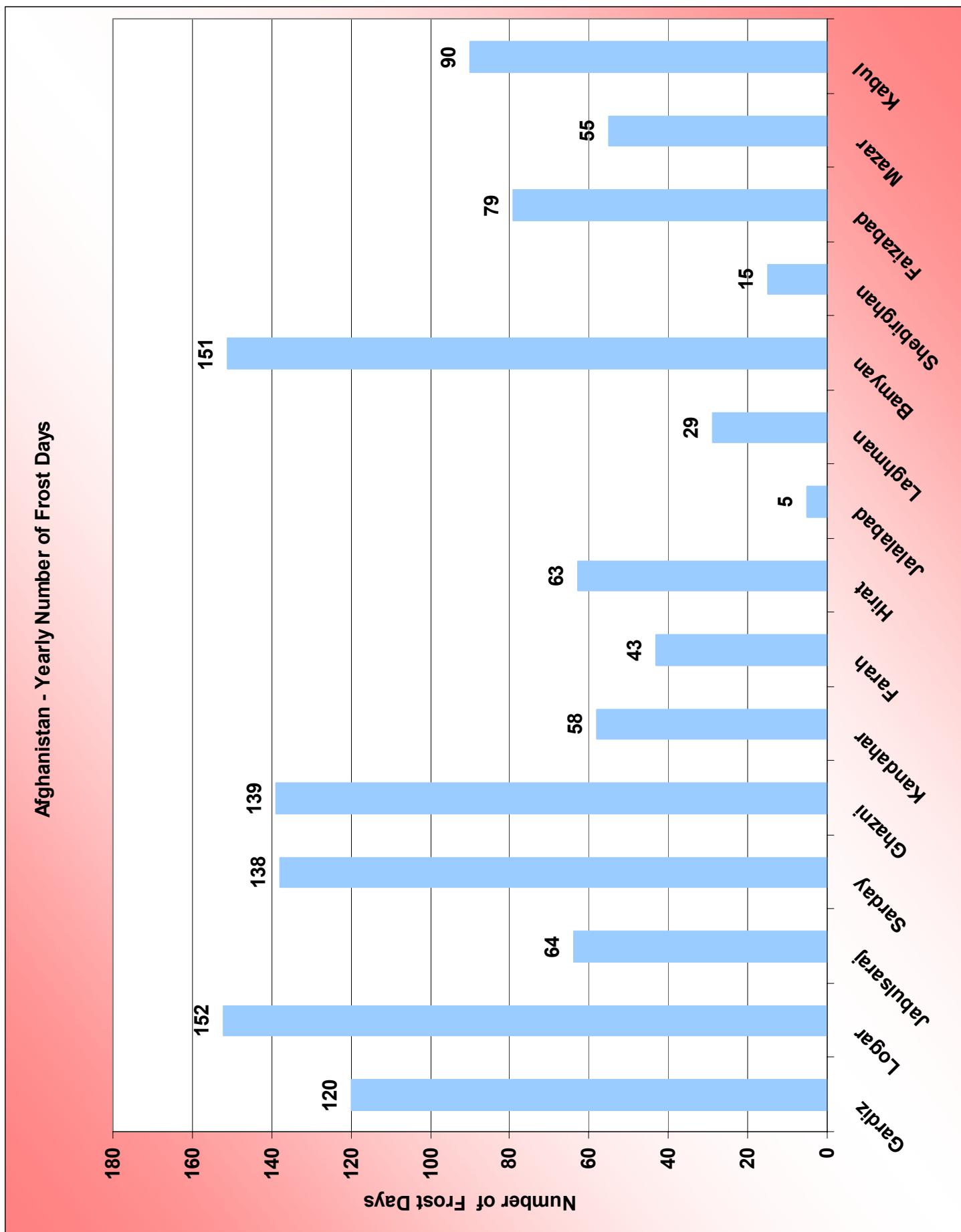


Max 2007 - 2008
Clouds
Large Dec
Small Dec
No Change
Small Inc
Large Inc

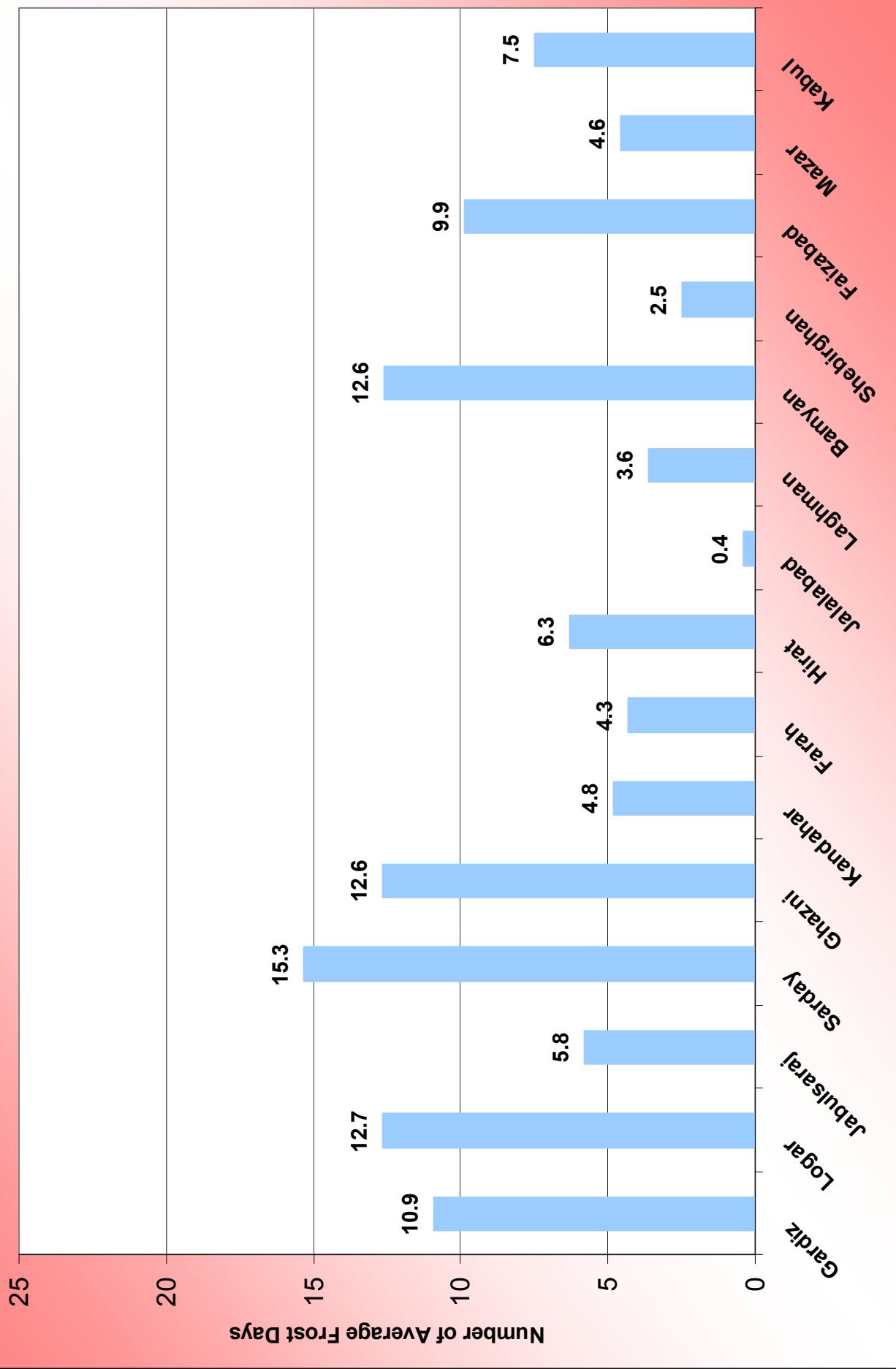
USGS Agromet Project



Frost Days
Compared with
Last Year and Long Term Average
Agricultural Season 2007 - 2008



Yearly Average for Frost Days in Afghanistan



Number of Free Frost Days in Afghanistan 2007-2008

